

<110> Bledig, Stefan A.
 Byrum, Joseph R.
 Liu, Jingdong
 Hinkle, Gregory J.

<120> Nucleic Acid molecules And Other Molecules Associated With The
 Methionine Synthesis And Degradation Pathways

<130> 38-21(15077)B

<160> 3204

<210> 1
 <211> 235
 <212> nucleic acid
 <213> Zea mays

<400> 1

gttttccgtc tagcctcggg ggacagatcg acgctgccca tgctgataaa tggacgggtcc 60
 tgatccattg ttcgttgtgt tattaatgtt gtataattga gcaggacaca acacgtacgt 120
 tnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnca ggttcatcaa gaccgccgca 180
 tacggccact ttggccgtga cgacgccgac ttcacctgcg aggtgggtcaa gcccc 235

<210> 2
 <211> 313
 <212> nucleic acid
 <213> Zea mays

<400> 2

cacatccggt tgnctcttct cnntcttgcc ggtcccgaat aaaaancagc ancgcaagan 60
 gtcggtagan cnagaagaan gcantngcgg ccganangtt ccttttcaen tcggagtcgg 120
 tgnannaggc gcancccgac aagctgtgcg accaggtgtc ggacgccgtg nttgacgcnt 180
 gcctcnncna gnaccccgac ancaangtng cctgncacan gtgcaccaag accaactgg 240
 tgatgggtgtt cggcgagntn acgaccaagg cgaccgttga ctannagaag atcgtnngnn 300
 acacntgccg cga 313

<210> 3
 <211> 77
 <212> nucleic acid
 <213> Zea mays

<400> 3

ctgcgagacc ttcacnaaga ccaacatggt gatgttgntc ggcggnatca cgaccnangc 60
tacngtggnc tacnaga 77

<210> 4

<211> 279

<212> nucleic acid

<213> Zea mays

<400> 4

tcatcattga cacctacngt ggctggggag cccatggtgg tggcgctttc tccggcaagn 60
nnncnannan ngnnnantgc agnngncgnt atntannaag gcacnatncn ttgatgtctg 120
cgatgacacg gactattctt ggagagcaaa gggcttccat gagcaagcaa aagctgccgg 180
tgttccggct attactactg ctggcatcta tccaggagtt agcaatgtga tggctgctga 240
cttgatcatg tgccagaagt gaaaatgnga acctgaaga 279

<210> 5

<211> 211

<212> nucleic acid

<213> Zea mays

<400> 5

ggaccgcagc ggcgcntang tggccaggca ggccgccaag agnatcntgg ncagnggatc 60
gcncgcngct gcctcgtgca ggtgtacgta cncatnngn tggccggann ccctgnccgt 120
gttcgtnaac tcgtacgagc accggcacgn tnaangncaa ggagatcntc aanatcntna 180
naggagaact tcgacttcag gcccgggatg a 211

<210> 6

<211> 266

<212> nucleic acid

<213> Zea mays

<400> 6

gtctgttttt tttccccatt aattgtcaat ctacaattca aatcacattc acaatgggta 60
gcgtcagcca caagacagga actttcctgt tcacctccga gtccgtaggt gaaggtcacc 120
ctgacaagat cgctgatcag gtctctgacg ccgttctcga tgctgcttg gccgaggacc 180

ctctctccaa agtcgcttgc gagactgcta ccaagaccgg tatgatcatg gtcttcggtg 240
 aaatcaccac caaagccaag ctcgat 266

<210> 7
 <211> 168
 <212> nucleic acid
 <213> Zea mays

<400> 7
 gggggcgttt ccnccagttc tgtgggngct accgtgtagn ntgcgcggcc gatncacgcn 60
 tctaangntg agtcggtcna caacgacgan atcgccgngg acctcangga gcacgtcnnc 120
 annncgtga tgnctgataa gtacctcgac gagaagacca tcttnac 168

<210> 8
 <211> 570
 <212> nucleic acid
 <213> Zea mays

<400> 8
 ggnnnnnnnn aacttctagn tgnncggtgc cgtcanaaat tcaagggten acccacgcgc 60
 cgaacacgcn tccgccacg cgtccgcca cgcgtccgga ctagttctag atggcggtgc 120
 gctttctccg gcaaggaccc aaccaagggt gaccgcagcg gagcctatgt cgcgaggagg 180
 ctgccaagag catcgtcgcc agcggccttg ctgcgcgcg catcgccag gtgtccacgc 240
 catcggcggtg cccgagcctc tctccgttgt tttgtcgaca acttacggca accggcgcca 300
 ttccccgaca agggagattc ctcaaagatt gtcaaagga gaaatttcga atttaagggc 360
 cttggcaatg attaataat caaacctttg aacctccaaa gaaaaanggc gggaaacngg 420
 cggctaacct cnaanaacgg gcaagcctaa tggggcaact tcggaaagg gaaaccctgg 480
 actttcacct gggaaagggt ggtgaaaacc cactcaaant cggggggaaa actttcggcc 540
 tnaaagggg gccttttttt tnaataaana 570

<210> 9
 <211> 473
 <212> nucleic acid
 <213> Zea mays

<400> 9

tcttnagtgt ncnengncgc ctgccntcgt tttgggcccc ggccccctat aatgagtcaa 60
 ntanngcgtc cgaatTTTTT tcnogtngaa nanttgntcn ngggcggcgc catggtgccg 120
 tccgcgtgca naccgtgctc atctccaccc agcacanoga nnccgaggga acgncganc 180
 nccgcngnnn tcnaggggna cgtcatcaag cccgtgatcc ctgngacgtn cctcngnaga 240
 agacntctt ccacctcnn cgtccgggc gcttctcan cggcngggccc cncgggacgc 300
 cggcctcacc ngccgcnnga tcatctcgg gcnatncgg cngetgggga gcccctttt 360
 tggcgcttc tccnggnng gncctagca ncggtngacc gcanccgggc ctantgnccc 420
 tnncaggccn ccancannca tcttgccag cggcctcngc ccgncgnnc cct 473

<210> 10
 <211> 428
 <212> nucleic acid
 <213> Zea mays
 <400> 10

acctaaaggn ttacgttata aagccngtca tcccaganag gggcggggga ctagaagacg 60
 ntgntncacc tcaaccgcgc ngggcgcttn ntcctcngcg ggccccacgg tgactcctnn 120
 ctacccggcc ancaagatca tcatngacac ctacggcnn cggggagccc acnncgnggg 180
 cgccttcttc ggnaaggacc ccaccaaggt gnaccnnaan ggggcctacn tcgcnnnca 240
 tgnogtcaag agcattgtgg ccagncgcct nttncnagc ttgctcgtgc aggtgtacta 300
 cgnatcggc gtgcctgaan cctttcant nttcgttgaa ttctanagna accgggacca 360
 ttcccgacaa gganaatctt aaagatngtt aangatnaac tttncctcaa ggncnggnt 420
 gatcacca 428

<210> 11
 <211> 87
 <212> nucleic acid
 <213> Zea mays

<400> 11
 tggctcngc tgtctgcnet ctatcatgen ttnttatggc tctacnagt tgnattctt 60
 gatntgnccc tngcttatca ttttact 87

<210> 12

<211> 444
 <212> nucleic acid
 <213> Zea mays

 <400> 12

 tnatgttggt cggcgagatc accaccaang cgagngtnta ctacgagaag atngtgcgcg 60
 acacctgccg cgagatctgg ttacacctcn acnacntggg ggctcgaccc caccnctcaa 120
 ggtgcttggt aacatttaca ncaatcccc acattcccaa ggcnttcaen ggcactttta 180
 caaaacgncc naaggaaaat cggccccgcn aacaaagcca aatttttcgg ttccccaccc 240
 ancanacncc caacttattc cccttaacca cctgcttgca ccaaactttt tnnncnccct 300
 tantcgaagt tcnnaaagga cngnaccttt cctttgttaa accccaaagn aaaaaccaa 360
 tttaccgttn nantntntta aaaaaaggcc gcncctntt nnccttttc cnttcacaac 420
 cctnttttat tttttannca aaaa 444

<210> 13
 <211> 513
 <212> nucleic acid
 <213> Zea mays

 <400> 13

 gnngnnnnngn ggtaattcna cgccggangg taccggtcag cnaattcccg ggtenacca 60
 cgcgctccgaa ggggtgtgcat ggccacttca ccaagcgccc cgaggagatt ggagctggtg 120
 accagggaca catgttcggg tatgcgaccg atgagacccc tgagttgatg cccctcagcc 180
 atgtccttgc caccaagcta ggtgctcgtc tcaccgaggt ccgcaagaac ggaacctgcc 240
 cctggctcag gcctgatggg aagaccaggt tgacagtcga gtaccgcaat gaggggtggtg 300
 ccatgggcc catcgtgtc cacaccgtcc tcctctccac ccagcacgac gagacagtga 360
 ccaatgatga gatcgtgct gacctgaagg agcatgtcat caagcctgtc atccctgagc 420
 agtaccttga cgagaagacc atcttccacc ttaaccctac tggcgcgttt gtcattggtg 480
 gacctcaang cgaatctggg ctcaatgggc nca 513

<210> 14
 <211> 520
 <212> nucleic acid
 <213> Zea mays

<400> 14

gnnngngnggt nntnntgnag gggngtgnan ggaaanttgt accggtncgg aattcccggg 60

tcgacccacg cgtccgtgat ccctgagaag tacctcgacg agaagaccat cttccacctc 120

aaccgcgtccg ggcgcttcgt catcggcggg cccacgggtg acgcccgcct caccggccgc 180

aagatcatca tcgacacgta cggcggctgg ggagcccacg gcggtggcgc cttctccggc 240

aaggacccca ccaaggtgga ccgcagcggc gcctacgtgg ccaggcaggc cgccaagagc 300

atcgtggcca gcggcctcgc ccgcgcgtgc ctcgtgcagg tgcgtacgc catcggcgtg 360

ccggagcccc tgtccgtggt cgtcaactcg tacggcaccg gcaçgatccc cgacaaggag 420

atcctcaaga tcgtgaagga gaacttcgac ttcagcccgg gatgatcaag catcaacctn 480

gacctgaaag aaaggcngna acanggtcat taaaaaccgc 520

<210> 15

<211> 511

<212> nucleic acid

<213> Zea mays

<400> 15

gtgggngnttn gnggnatttn taggcggnnc gtaccggacc ngaaattccc ggggccaccc 60

acgcgtccgc aagacccttg agctgatgcc cctcagccat gtccttgcca ccaagcttgg 120

tgcctgtctc acggagggttc gcaagaatgg aacctgcccc tggctcaggc ccgatgggaa 180

gaccaggtg acagtggagt accgcaacga ggggtggcgc atggttccca tccgtgtgca 240

cacagtccctc atctctaccc agcacgacga gacagtcacc aacgacgaga ttgctgctga 300

cctgaaggag cacgtcatca agccagtcac ccccgagcag tacctcgacg agaagacaat 360

cttccacctc aaccggtctg gccgcttcgt catcggcgga cctcacggcg acgctggcct 420

cactggccgg aagatcatca tcgacaccta cgggtggctgg ggaaccacg gcggggggcgc 480

cttctccggc aaggaccga caaggtggac c 511

<210> 16

<211> 483

<212> nucleic acid

<213> Zea mays

<400> 16

aaggtgctgg tgaacatcga gcagcagtc ccgcacatcg cgcanggcgt gcacgggcac 180
 ttcacgaagc ggcccagagga gatcggcgcg ggcnacagg gccacatggt cgggtacgcc 240
 accgacnaga cccccagagct gatgccgctc agccacgtgc tggccaccaa gctgggcgcg 300
 cgcctcaccg aggtgcncan gaacggcacc tgcncctggc tgaggcccg cggcaagacc 360
 caggtgacng tggagtacgt gaacnagggc ngctccatgg tgcccgtccg ngtgcacacc 420
 ttgctnatct tcaccacagna ctacnagacc gtancaacta ctagatcgnc ttnt 474

<210> 19
 <211> 435
 <212> nucleic acid
 <213> Zea mays

<400> 19

cgagggacac cctgacaagc tctgtgacca ggtctgagat gccgttcttg acgcttgcct 60
 tgctgaggac cctgacagca aggttgcttg tgagacctgc accaagacca acatggtcat 120
 ggtcttttgt gagatcacca ccaaggccaa tgttgactac gagaagattg tcagggagac 180
 ctgccgcaac atttggttttg tgtcaaacga tgttgggctt gacgccgacc actgcaaggt 240
 gctcgtgaac attgagcagc agtccccga tattgctcan ggtgtgcatg gncacttacc 300
 aagcgccccg aggagattgg agctgggtgac cagggacaca tgttcgggta tgcgaccgat 360
 gagacccttg agttgatgcc cctcaccatg tccttggcac caagctangt gctcgtctta 420
 ccgangtccg caaag 435

<210> 20
 <211> 422
 <212> nucleic acid
 <213> Zea mays

<400> 20

accgaggtgc gcaagaacgg cacctgcgcc tggtgaggg ccgacggcaa gaccaggtg 60
 acggtggagt acgtgaacga gggcggcgcc atggtgcccg tccgcgtgca caccgtgctc 120
 atctccacc agcacgacga gaccgtcacc aacgacgaga tcgccgccga cctcaaggag 180
 cagtcacatc agcccgtgat cctgagaag tacctcgacg agaagacat ctccacctc 240
 aaccggtccg ggcgcttcgt catcggcggg cccacgggtg acgccggcct caccggccgc 300

aagatcatca tcgacacgta cggcggctgg ggaacccaag gcggtggcgc cttctccggc 360
aaggacccaa caangtgga cgaangggg gccaan ttgg caaggaagcc gcaagaanat 420
ct 422

<210> 21
<211> 488
<212> nucleic acid
<213> Zea mays
<400> 21

ggnnnnngna actttacgcc ggcnngtacg nctcanaaat tccaaggncg acccaccgc 60
cncgaataaa gagcagcagc gcaagaggtc ggtagagcga gaagaaggca atggcggcga 120
gagcttcctt ttcacctcgg agtccttgaa cgaggggcac cccgacaagc tgtgcgacag 180
gtgtcggacg ccgtgcttga cgcattgcctc gcgcaggacc ccgacagcaa ggtggctgcg 240
agacctgcac caagaccaac atgggtgatgg tgttcggcga gatcacgacc aaggcaccgt 300
ggactacgag aagatcgtgc gcgacacctg ccgcgagatc gggttcacct ccgagacgtg 360
ggcctcgacg ccgaccgtg caagggtgctg gtgaacatcg agcagcaatc cccgacatcg 420
cgcaaggcgt gcacgggcac ttcacgaaac ggnccgagga gatnggcgcn gggacaaggg 480
ccacatgt 488

<210> 22
<211> 491
<212> nucleic acid
<213> Zea mays
<400> 22

gggnnnnngn aanttttctt gcccgccagg taccaatcaa gaattcncgg gtcgaccac 60
gentcngat cgctgctgac ctgaaggagc atgtcatcaa gcctgtcatc cctgagcagt 120
accttgacga gaagaccatc ttccacctta acccatctgg ccgctttgtc attgggtggac 180
ctcacggcga tgctggcctc actggccgca agatcatcat tgacacctac ggtggctggg 240
gagcccatgg tgggtggcgt ttctccggca aggacccaac caagggttgac cgcagcggag 300
cctatgtcgc aaggcaggct gccaaagaca tcgtcgccag cggccttgct cgcgcgcca 360
tcgtccaggt gtcttacgcc atcggcgtgc ccgagcctct ctccgtgttc gtcgacacgt 420

acggcaacgg cgccattccc gacaaggaga ttctcaagaa tgtcaaggan aacttcaatt 480
caaggctggg a 491

<210> 23
<211> 439
<212> nucleic acid
<213> Zea mays
<400> 23

attggtggac ctacaggcga tgctggcctc actggccgca agatcatcat tgncaentac 60
ggtggctggg gagcccatgg tgggtggcgt ttctccggca aggacccaac caaggttgac 120
cgcagcggag cctatgtcgc aaggcaggct gccaaagagca tcgtcgccag cggccttgct 180
cgccgcgcca tcgtccaggt gtcttacgcc atcggcgtgc ccgagcctct ctccgtgttc 240
gtcgacacgt acggcaccgg cgcgatcccc gacaaggaga tcctcaagat tgtcaaggag 300
aacttcgatt tcaggcctgg catgatcatc atcaaccttg acctcaagaa aggcggcaac 360
gggcgctacc tnaagacggn ggnetacggc actttggaag ggacgacctn acttncctng 420
gangggggggg aanccctta 439

<210> 24
<211> 502
<212> nucleic acid
<213> Zea mays
<400> 24

gggnnnngng naactgtcta ccttgcccgt gccggtccaa aattaacggg tccacccacg 60
cgtccggncc aatgtcgact acgagaagat tgtcaggag acatgccgca acattggttt 120
cgtgtcgaac gatgtcgggc ttgacgctga ccaactgcaag gtgcttgtga acattgagca 180
gcagtccctt gatattgtct aggggtgtgca cggccaacttc accaagcgcc ccgaggagat 240
tggagctggt gaccaggggc acatgttttg gtatgcgact gacgagacc ctgagctgat 300
gcccctcagc catgtccttg ccaccaagct tgggtgctcgt ctacggagg ttcgcaagaa 360
tggaacctgc cctgggtca ggcccgatgg gaagaccag gtgacagtgg agtaccgcaa 420
cgagggtggc gccatggttc ccatccgtgt gcacacagtc ctcatctcta cccaacacga 480
cgaagacagt caacaaacga cg 502

<210> 25
 <211> 476
 <212> nucleic acid
 <213> Zea mays

<400> 25

ggnnnnntntt nagnngggggg attaatggna tgctntaccg gtccggaatt cccgggtcga 60
 cccacgcgtc cgccgaggtc cgcaagaacg gaacctgccc ctggctcagg cctgatggga 120
 agaccaggt gacagtcgag taccgcaatg aggggtggtgc catggtcccc atccgtgtcc 180
 acaccgtcct catctccacc cagcacgacg agacagtgc caatgatgag atcgctgctg 240
 acctgaagga gcatgtcatc aagcctgtca tccctgagca gtaccttgac gagaagacca 300
 tcttccacct taacctatct ggccgctttg tcattggtgg acctcacggc gatgctggcc 360
 tcaactggccg caagatcatc attgacacct acggtggctg gggagcccat ggtggtggcg 420
 ctttctccgg caaggacca accaagggtg accgcagcgg acctatgtcg caaggc 476

<210> 26
 <211> 393
 <212> nucleic acid
 <213> Zea mays

<400> 26

cctgcaccaa gaccaacatg gtcattggtct ttggtgagat caccaccaag gccaatgttg 60
 actacgagaa gattgtcagg gagacctgcc gcaacattgg ttttgtgtca aacgatgttg 120
 ggcttgacgc cgaccactgc aagggtgctcg tgaacattga gcagcagtc cctgatattg 180
 ctcagggtgt gcatggccac ttcaccaagc gccccgagga gattggagct ggtgaccagg 240
 gacacatgtt cgggtatgcg accgatgaga cccctgagtt gatgcccctc agccatgtcc 300
 ttgccaccaa gctaggtgct cgtctcaccg aggtccgcaa gaacggaacc tgcccctggc 360
 tcaagcctga tgggaaaaac caaggtgaca gtc 393

<210> 27
 <211> 435
 <212> nucleic acid
 <213> Zea mays

<400> 27

cgagacagtg accaatgatg agatcgctgc tgacctgaag gagcatgtca tcangcctgn 60
catccctgag cagtaccttg acgagaagac catcttccac cttaacccat ctggccgctt 120
tgtcattggt ggacctcacg gcgatgctgg cctcactggc cgcaagatca tcattgacac 180
ctacngtggc tggggagccc atggtggtgg cgctttctcc ggcaaggacc caaccaaggt 240
tgaccgcagc ggagcctatg tcgcaaggca ggctgccaaag agcatcgtnn ccagcggcct 300
tgctcgccgc gccatcgctc aggtgtctta cgccatcggn gtgcccagagc ctctctccgn 360
gttcgtngac acgtactgna ccggcctatc cccnacaang agatcttaag attgtcaagg 420
agaactttta tttca 435

<210> 28
<211> 435
<212> nucleic acid
<213> Zea mays
<400> 28

agcccacggc gggggcgctt tctccggcaa ggaccccacc aaggtggacc gcagcggggc 60
ctacgtcgcc aggcaggccg ccaagagcat cgtggccagc ggccctcgccc gccgctgcct 120
cgtgcagggtg tctacgcca tcggcgtgcc ggagcccctg tccgtgttcg tcgactccta 180
cggcaccggg accatccccg acaaggagat cctaaagatc gtcaaggaga acttcgactt 240
caggccaggg atggtcacca tcaacctcga cctcaagaag ggcggaaca ggttcatcaa 300
gaccgccgca tacggncact ttggccgtga cgacgccgac ttcacctggg aggtggtcaa 360
gccctaaag aangcattcc gcttaagaat gtattgggaa gttcactgga catgaagttc 420
atcttcgtct ggctt 435

<210> 29
<211> 484
<212> nucleic acid
<213> Zea mays
<400> 29

ttcgnatggt tcanactgcc annacagntc aaggntcgc gggtcgannc angcctcnag 60
gcanntncgc ntgactgagg cccgacggca agaccaggt gacggtggag tacgtgaacg 120
aggcgggcgc catggtgccc gtccgcgtgc acaccgtgct catctccacc cagcacgacg 180

agaccgtcac caacgacgag atcgccgccc acctcaagga gcacgtcatc aagcccgtga 240
 tccctgagaa gtacctcgac gagaagacca tcttccacct caaccggtcc gggcgcttcg 300
 tcacggcgcg gcccacgggt gacgcccggc tcaccggccg caagatnadc atcgacacgt 360
 acggcggtcg gggagcccac ggcgggtggcg ccttctccgg caaggacccc accaaaggtg 420
 gaccgcaacg gcgcctaagn nggccaaggc agggccgcca annagnnttc ntgncaagcg 480
 ggng 484

<210> 30
 <211> 416
 <212> nucleic acid
 <213> Zea mays

<400> 30

ctcacagagg ttgcgaagaa tggaacctgg ccctggctca ggcccgatgg gaagaccag 60
 gtgacagtgg agtaccgcaa cgagggtggc gccatgggtc ccatccgtgt gcacacagtc 120
 ctcattctta cccagcacga cgagacagtc accaacgacg agattgctgc tgacctgaag 180
 gagcacgtca tcaagccagt catccccgag cagtacctcg acgagaagac aatcttccac 240
 ctcaaccgt ctggccgntt cgtcatcggc ggacctnagc gcgacgcccg cctactggcc 300
 gnaagatcat catcgacacc tacggtgggt ggggagccca cggcgggggc gccttcttcg 360
 gcaaggaccc gaccaangtg gaccgcacgg ggcctacgtc cgaggnaagc ttgcna 416

<210> 31
 <211> 484
 <212> nucleic acid
 <213> Zea mays

<400> 31

attggtggac ctacggcgga tgctggcctc actggccgca agatcatcat tgacacctac 60
 gggggctggg gagcccatgg tgggtggcgt ttctccggca aggacccaac caaggttgac 120
 cgcagcggag cctatgtcgc aaggcaggct gccaaagagca tcgtcgccag cggccttgct 180
 cgccgcgcca tcgtccaggt gtcttaacgc atcggcgtgc ccgagcctct ctccgtgttc 240
 gtcgacacgt acggcaccgg cgcgatcccc gacaaggaga tcctcaagat tgtcaaggag 300
 aacttcgatt tcaggcctgg catgatcatc atcaaccttg acctcaagaa aggcggcaac 360

gggccgctac ctnaagacgg cggnctacgg gcacttttgg aaagggacca acctgacttn 420
 acctgggaag ggggtgaaccc cttaagtcgg agaaaccott ttgctaaggg ggcctttttt 480
 ttaa 484

<210> 32
 <211> 477
 <212> nucleic acid
 <213> Zea mays

<400> 32

aactttattg ccaggcacgg taaangaatc ccgggtcgac ccacgcgtcn gaggaccccc 60
 caaggtggac cgcagcggcg cctacgtggc caggcaggcc gccaaagaca tcgtggccgc 120
 ggcctcgccc gccgctgcct cgtgcagggt tcgtacgcca tcggtgtgcc ggagccctgt 180
 ccgtgttcgt cgactcgtac ggcaaccggca cgatccccga caaggagatc ctcaagtcgt 240
 gaaggagaac ttcgacttca ggcccgggat gatcagcatc aacctcgacc tgaagagggc 300
 ggcaacaggt tcatcaagac cgccgcttac ggccatttcg gccgtgacga cgccacttca 360
 cctgggaagt ggtgaagccc ctcaagttcg acaaggcatc cggcttaang ttggaatnnt 420
 caacggtggg gcatgaggac taccttcctc cnggctctgc tgttacctgc aacattg 477

<210> 33
 <211> 488
 <212> nucleic acid
 <213> Zea mays

<400> 33

ggnnnnnnnn naactgttac gcntgccggt gccgggtccag aattcacggg tcgacccacg 60
 cgtccgcggt tgccctcttct cctctttgcc ggggtccgaa taaagagcag cagcgcaaga 120
 gtcggtagag cgagaagaag gcaatggcgg ccgagagctt cctttttcacc tcggagtccg 180
 tgaacgaggg gcaccccgac aagctgtgcg accagggtgtc ggacgcccgtg cttgacgcat 240
 gccctcgcca ggaccccgac agcaagggtgg cctgcgagac ctgcaccaag accaacaatgg 300
 tgatggtggt cggcgagatc acgaccaagg cgaccgtgga ctacgagaag atcgtgcgcg 360
 acacctgccg cgagatcggg ttacactccg acgacgtggg cctcgacgcc gaccgctgca 420
 aggtgctggt gaacatcgag caacagtccc cgacatcgcg caaggcgtgc acgggcactt 480

cacgaaac

488

<210> 34
<211> 480
<212> nucleic acid
<213> Zea mays

<400> 34

ggggnnngnn ggtctctttt ggccnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnncc 60
acgcntccgc gtttgcctct tctccctctt gccggtcccg aataaagagc agcagcgcaa 120
gaggtcggta gagcgagaag aaggcaatgg cggccgagag ctctcttttc acctcggagt 180
ccgtgaacga ggggcacccc gacaagctgt gcgaccaggt gtcggacgcc gtgcttgacg 240
catgcctcgc gcaggacccc gacagcaagg tggcctgcga gacctgcacc aagaccaaca 300
tggtgatggg gttcggcgag atcacgacca aggcgaccgt ggactacgag aagatcgtgc 360
gcgacacctg ccgcgagatc gggttcacct ccgacgacgt gggcctcgac gccgaccgct 420
gcaaggtgct ggtgaacatc gagcagcagt cccccgacat cgcgcaaggc gtgcacgggc 480

<210> 35
<211> 453
<212> nucleic acid
<213> Zea mays

<400> 35

ccgttcgcct cttctcctcc ctcttgccgg gtccttaata aagagcagca ncgcaagagg 60
tnggtagagc gagcgagaag aaggcaatgg cggcgagag ctctctgttc acctcggagt 120
ccgtgaacga ggggcaccca gacaagctgt gcgaccaggt gtcggacgcg gtgctggacg 180
cctgcctggc gcangacccc gacagcaagg tggcctgcna gacctgcacc aagacgaaca 240
tggtgatggg gttcggcgag atcaccacca aggcgagcgt ggactacgag aagatcgtgc 300
gcgacacctg ccgcgagatc gggttcacct tcgacgacgt ggggctcgac nccnaccgct 360
gcaaggtgct ggtgaacatc gagcagcagt cccccgacat cgcgcaaggc gtgcacggca 420
ctttacgaaa ccggcccag gagatcggcc cnt 453

<210> 36
<211> 505
<212> nucleic acid

<213> Zea mays

<400> 36

agggttggtg anngttggnt anatganann tgcttttacn cggtttcgga attcccgggt 60
cgacccacgc gtccgcccgt tcgcctcttc tncctnctcc tgcggggtcc ttaataaaga 120
gcagcagcgc aagagggttg tagagcgagc gagaagaagg caatggcggc ggagagcttc 180
ctgttcacct cggagtccgt gaacgagggg caccagaca agctgtgcga ccagggtgctg 240
gacgcgggtgc tggacgcctg cctggcgcan gaccccgaca gcaagggtggc ctgcgagacc 300
tgcaccaaga cgaacatggt gatggtgttc ggcgagatca ccaccaaggc gagcgtggac 360
tacgagaaga tcgtgcgcga cacctgccgc gagatcgggt tcacctnoga cgacgtgggg 420
ctcgacgccg accgctgcaa ggtgctggtg aacatcgagc ancagtcccc cgacatcgcg 480
cagggcgtgc acgggcactt tacga 505

<210> 37

<211> 447

<212> nucleic acid

<213> Zea mays

<400> 37

gcagtccctt gatattgctc aggggtgtgca cggccacttc accaagcgnc ccgaggagat 60
tggagctggt gaccaggggc acatgttttg gtatgcgact gacgagacc ctgagctgat 120
gccccctcagc catgtccttg ccaccaagct tgggtgctcgt ctacagagg ttcgcaagaa 180
tggaacctgc ccctggctca ggcccgatgg gaagaccag gtgacagtgg agtaccgcaa 240
cgaggggtggc gccatgggtc ccatccgtgt gcacacagtc ctcatctcta cccaacacga 300
cgagacangt caccaacgac gaagattgct gctgacctga aaggaacaac gtcatacaac 360
caagtcatnc ccgaacagta cttttgacga gaagacaatc tttcanotta acccgctctgg 420
nccntttgtc atnngnggac ctnaacg 447

<210> 38

<211> 420

<212> nucleic acid

<213> Zea mays

<400> 38

ggncgctttg tcattggtgg acctcacggc gatgctggcc tcaactggccg caagatcntc 60
atngacacct acggtggctg gggagcccat ggtggtggcg ctttctccgg caaggaccca 120
accaaggttg accgcagcgg agcctatgtc gcaaggcagg ctgccaagag catcgtcgcc 180
agcggccttg ctgcgcgcgc catcgtccag gtgtcttaag ccatcggcgt gcccagacct 240
ctctccgtgt tcgtcgacac gtacggcacc ggcgcgatcc ccgacaagga gatcctcaag 300
attgtcaaag gagaacttcg atttcaggcc tggcatgac atcatcaacc ttgacctcaa 360
gaaaggcggc aacgggcgct tancctaaga acggcggnct acgggcactt ttggaangga 420

<210> 39
<211> 499
<212> nucleic acid
<213> Zea mays
<400> 39

cccatctggc cgcttttgtca ttggtggacc tcacggcgat gctggcctca ctggccgcaa 60
gatcatcatt gacacctacg gtggctgggg agcccatggt ggtggcgctt tctccggcaa 120
ggaccaaac aaggttgacc gcagcggagc ctatgtcgca aggaggctg ccaagagcat 180
cgtcgccagc ggctttgttc gccgcgccat cgtccagggt tcttacgcca tcggcgtgcc 240
cgagcctctc tccgtgttcg tcgacacgta cggcaccggc gcgatccccg acaaggagat 300
cctcaagatt gtcaaggaga acttcgattt caggcctggc atcatcatca accttgacct 360
caagaaaggc ggcaacgggc gctacctnaa gacggcggcc tacggcactt tggaaggggac 420
gacctgact tcacctggga ggtggtgaaa ccaactcaaag tcggagaaac cttntgctaa 480
agcnggcttt tttttaaaa 499

<210> 40
<211> 494
<212> nucleic acid
<213> Zea mays
<400> 40

ggnnnnngnn nnngttaact tntccgccgg caggtaangg tcaagaattc ccgggtcgac 60
cacgcgtccg ctncctcttg ccggtccga ataaanagca gcagcgcang aggtcgggtga 120
gcgagaagaa ggcaatggcg gccgagagct tccttttcac ctcggantcc gtgaacgggg 180

gcaccccgac aagctgtgcg accaggtgtc ggacgccgtg cttgacgcat gcctcggcag 240
gaccccgaca gcaangtggc ctgcgagacc tgcaccaaga ccaacatggt gatgggttcg 300
gcgagatcac gaccaaggcg accgtggact acgagaagat cgtgcgcgac acctccgcga 360
gatnnggttc acctccgacg aactgggcct cnaacgccga accgctgcaa ggtctggtga 420
acatcnanca gcatttcccc gacatcgcg agggcntgca cgggcacttc acaagcngcc 480
cgaggagatc ngcg 494

<210> 41
<211> 499
<212> nucleic acid
<213> Zea mays

<400> 41

gggnttntn tgntgnngat ntntggcnnn ccggtccgga attcccgggt cgacccacgc 60
gtccgnccac gcgtccgcat catcgacacg tacgnggct ggggagccca cggcgggtggc 120
gcctnctccg gcaaggaccc caccaagggtg gaccgcagcg gcgcctacgt ggccaggcag 180
gccgccaaga gcatcgtggc cagcggcctc gccgcgcgt gcctcgtgca ggtgtcgtac 240
gccatcggcg tgccggagcc cctgtccgtg ttcgtcgact cgtacggcac cggcacgac 300
cccgacaagg agatcctcaa gatcgtgaag gagaacttca acttcaggcc cgggatgac 360
agcatcaacc tcgacctgaa gaangggcg aacagggttca tcangaccga cgctacggcc 420
acttcggccg tgacgacgc gactttacct gggaagtggg gaagcccctt aagttccaca 480
aggattnggt ttaaggttg 499

<210> 42
<211> 325
<212> nucleic acid
<213> Zea mays

<400> 42

cccgacggca agaccaggt gacggtggag tacgtgaacg anggcggcgc catggtgccc 60
gtccgcgtgc acaccgtgct catctccacc cagcacgacg agaccgtcac cnaacgacga 120
gatcgccgcc gacctcaagg agcacgtcat caagcccgtc atcccggaga ggtacctgga 180
cgagaagacc atcttccacc tcaaccgcgc ggggcgcttc gtcacggcg ggccccacgg 240

ggacgccggc ctcaccggcc gcaagatcat catcgacacc tacggcggct ggggagccca 300
cggcgggggc gccttctccg gcaag 325

<210> 43
<211> 319
<212> nucleic acid
<213> Zea mays

<400> 43

agcggcccga ggagatcggc gcggggcacc agggccacat gttcgggtac gccaccgacg 60
agacccccga gctgatgccg ctgagccacg tgctggccac caagctgggc gcgcgcctca 120
ccgaggtgcg caagaacggc acctgcgcct ggctgaggcc cgacggcaag acccaggtga 180
cggtggagta cgtgaacgag ggcggcgcca tgggtgcccg cgcgctgcac accgtgctca 240
tctccaccca gcacgacgag accgtcacca acgacgagat cgccgccgac ctcaaggagc 300
acgtcatcaa gcccgatg 319

<210> 44
<211> 429
<212> nucleic acid
<213> Zea mays

<400> 44

ggaacctgcc cctggctnag gcccgatggg aagaccaggg tgacagtgga gtaccgcaac 60
gaggggtggcg ccatggttcc catccgtgtg cacacagtcc tcatctctac ccagcagcag 120
gagacagtca ccaacgacga gattgctgct gacctgaagg agcacgtcat caagccagtc 180
atccccgagc agtacctnna cnagaagaca atcttcacct caaccgtnt ggccgcttcg 240
tcatcggcgg accttacggc gacnccggcc tnactggccg gaaagatcat natcgacacc 300
tacggtggct ngggagccca cggcgggggc gccttnttcg gcaaggaccc gaccaaagtt 360
gaccgcaacg gggcctacgt ngcgaggcaa gcttgcaana ncatngtnnn ccgccgnctt 420
nccgcggnc 429

<210> 45
<211> 315
<212> nucleic acid
<213> Zea mays

<400> 45

cgggcgacca gggccacatg ttcgggtacg ccaccgacga gacccccgag ctgatgccgc 60
 tgagccacgt gctggccacc aagctgggcg cgcgcctcac cgagggtgcg aagaacggca 120
 cctgcgcctg gctgaggccc gacggcaaga ccaggtgac ggtggagtac gtgaacgagg 180
 gcggcgccat ggtgcccgtc cgcgtgcaca ccgtgctcat ctccaccag cacgacgaga 240
 ccgtcaccaa cgacgagatc gccgccgacc tcaaggagca cgatcatcaag ccggtgatcc 300
 ctgagaagta cctcg 315

<210> 46

<211> 474

<212> nucleic acid

<213> Zea mays

<400> 46

ggggtcggnn gtnattctat antgataana ctcanataan tnnngnctcn taggacnntt 60
 anaannccct agagtnagtc gtttaacggc gggggcgccct tctccggcaa ggacccgacc 120
 aagggtggacc gcagcggggc ctacgtcgcg aggcaggctg ccaagagcat cgtcgcccgc 180
 ggccctcgccc gccgtgccat cgtccaggtc tcctacgcca tcggcgtgcc cgagcccctg 240
 tcggtgttcg tggacacgta cggcaccggc gcgatccccg acaaggagat cctgaagatc 300
 gtgaaggaga acttcgactt caggcccggc atgatcatca tcaacctga cctcaagaaa 360
 ggcggaacg ggcgctacct caagacggcg gcctacgggc actttgggag ggacgaaccc 420
 gacttcacct ggggaagtngt taaaccccc naaggcgga aanccttntt ctgg 474

<210> 47

<211> 410

<212> nucleic acid

<213> Zea mays

<400> 47

gtgcgcgaca cctgccgga gatcggggtt acctccgacg acgtgggcct cgacgccgac 60
 cgctgcaagg tgctggtgaa catcgagcag cagtccccg acatcgcgca nggcgtgcac 120
 gggcacttca cgaagcggcc cgaggagatc ggcgcgggcg accagggcca catgttcggg 180
 tacnccaccg acnagacccc cgagctgatg ccgctcagcc acgtgctggc caccaagctn 240

ggcncgcgcc tcaccgaggt tccgcaagac gggnacctgc gcctggntga nggcccgcgc 300
gcaagaccaa ggtnacggtg gagtacgtga actaggggcg ctccattggt gccctccgcg 360
ttcaaaaccg tgctaanttc accaagnact actaagaccg tnnccaacaa 410

<210> 48
<211> 297
<212> nucleic acid
<213> Zea mays

<400> 48

ttgcccgtcc gcgtgcacac cgtgctcatc tccaccacgc acgacgagac cgtcaccaac 60
gacgagatcg ccgccgacct caaggagcac gtaatcaagc ccgtcatccc gganaggtag 120
ctggacgaga agaccatctt ccacctcaac ccgtcggggc gcttcgtcat cggcggggccc 180
cacggggacg ccggcctcac cggccgcaag atcatcatcg acacctacgg cggctgggga 240
gcccacggcg ggggcgcctt ctccggcaag gacccacca aggtggaccg cagcggg 297

<210> 49
<211> 438
<212> nucleic acid
<213> Zea mays

<400> 49

ctggcctcac tggccgnaag atcatcatcg acacctacgg tggctgggga gcccacggcg 60
ggggcncctt ctccggcaag gacccgacca aggtggaccg cagcggggcc tacgtcgcga 120
ggcaggctgc caagagcatc gtcgccgcgc gcctcgcccg ccgtgccatc gtccaggctc 180
cctacgccat cggcgtgccc gagccctgt cgggtgttcgt ggacacntac ggcacggcg 240
cgatccccga caaggagatc ctgaagatcg tgaaggagaa cttcgacttc angcccggca 300
tgatcatcat caacctngac ctcaagaaag gcggnnacgg nccgtacct taaanaacgg 360
nnggcctacg ggcacttttg gaagggaacna acccnattt aacctgggaa gtggttnaac 420
cccttaaggc ggaaaaaa 438

<210> 50
<211> 316
<212> nucleic acid
<213> Zea mays

<400> 50
 cgtgaacgag gggcaccag acaagctgtg cgaccaggtg tcggacgcgg tgctggacgc 60
 ctgcctggcg caggaccccg acagcaaggt ggcntgcgag acntgcacca agacgaacat 120
 ggtgatggtg ttcggcgaga tcaccaccaa ggcgagcgtg gactacgaga agatcgtgcg 180
 cgacacctgc cgcgagatcg gggtcacctc cgacgacgtg gggctcgcgc ccgaccgctg 240
 caaggtgctg gtgaacatcg ancagcagtc ccccgacntc gcgcagggcg tgcacgggca 300
 nttcacgaag cggccc 316

<210> 51
 <211> 339
 <212> nucleic acid
 <213> Zea mays

<400> 51
 acacagtcct catctctacc cagcacgacg agacagtcac caacgacgag attgctgctg 60
 acctgaagga gcacgtcatc aagccagtc tccccgagca gtacctcgac gagaagacaa 120
 tcttccacct caaccgctct ggccgcttcg tcatcggcgg acctcacggc gacgcggctc 180
 tcaactggccg gaagatcatc atcgacacct acggtggctg gggagccac ggcggggcgc 240
 cttctccggc aangacccga ccaaggtgga ccgcagcggg gcctacgtcg cgaggcaggc 300
 tgccaagagc atcgtcgcgc cggcctcgcc gcnegcgtt 339

<210> 52
 <211> 300
 <212> nucleic acid
 <213> Zea mays

<400> 52
 agaagatcgt gcgcgacacc tgccgcgaga tcgggttcac ctccgacgac gtgggcctcg 60
 acgccgaccg ctgcaaggtg ctggtgaaca tcgagcagca gtcccccgac atcgcgcagg 120
 gcgtgcacgg gcaacttcacg aagcggcccc aggagatcgg cgcgggacgac cagggccaca 180
 tgttcgggta cgccaccgac gagacccccg agctgatgcc gctgagccac gtgctggcca 240
 ccaagctggg cgcgcgcctc accgaggtgc gcaagaacgg cacctgcgcc tggctgaggc 300

<210> 53

<211> 303
 <212> nucleic acid
 <213> Zea mays

 <400> 53

 gcccgaggag atcggcgcgg gcgaccaggg gccacatggt cgggtacgcc accgacgaga 60
 cccccgagct gatgccgtga gccacgtgct ggccaccaag ctgggcgcgc gcctcaccga 120
 ggtgcgcaag aacggcacct gcgcctgggt gaggcccgac ggcaagaacc aggtgacggt 180
 ggagtacgtg aacgagggcg gcgccatggt gcccgctcgc gtgcacaccg tgcctcatctc 240
 caccagcac gacgagaccg tcaccaacga cgagatcgcc gccgacctca aggagcacgt 300
 cat 303

54
 477
 nucleic acid
 Zea mays
 54

<210> 54
 <211> 477
 <212> nucleic acid
 <213> Zea mays

 <400> 54

 tatttncccg ccaggtacaa gtcaagaatt cccgggtcga cccacgcgtc cgtccacgct 60
 ccgcccacgc gtccgcccac gcgtccggcg gggcctacgt cgcgaggcag gctgccaaag 120
 catcgtcgcc gccggcctcg cccgcgcgc cattgtccag gtctcctacg ccatcggtg 180
 cccgagcccc ttctgggtgtt cgtggacacg tacggcaccg gcgcgatccc cgacaagaga 240
 tcctgaagat cgtgaaggag aacttcgact tcaggcccg catgatcatc atcaactcga 300
 cctcaagaaa ggcggaacg ggcgtacct caagacggcg gcctacgggc acttgggagg 360
 gacgaccccg acttcacctg ggaggtggtg aagccctca aggcggaaaa acctcttctg 420
 caagaagggc ctccccgggt ttggaanaa gcttttggtc tggctctggtc tgtctgg 477

<210> 55
 <211> 487
 <212> nucleic acid
 <213> Zea mays

 <400> 55

 ggnnnnngna antttaaccn ctagtaggac tgannggtca ggnattcacg ggtcgancca 60
 cgcgtccatg cggctcttct ccctcttgcc ggtcccgaaat aaagagcagc agcgcaagag 120

gtcggtagag cgagaagaag gcaatggcgg ccgagagctt ccttttcacc tcggagtccg 180
tgaacnaggg gcaccccgac aagctgtgcg accagggtgtc ggacgccgtg cttgacgcat 240
gcctcgcgca ggaccccgac agcaagggtgg cctgcgagac ctgcaccaag accaacaatgg 300
tgatggtggt cggcgaagat cacgaccaag gcgaccgtgg actacgaaga agatcgtgcg 360
cgacacctgc cgcgagatcg gggtcacctc cgacgacgtg ggccctcgacg ccgaccgtg 420
caangtgctg ggtgaacatc gagcagcagt cccccgacat cgcgcaaggc gtgcacgggc 480
acttcac 487

<210> 56
<211> 299
<212> nucleic acid
<213> Zea mays

<400> 56
acctgcacca agaccaacat ggtcatggtc tttggtgaga tcaccaccaa ggccaatggt 60
gactacgaga agattgtcag ggagacctgc cgcaacattg gttttgtgtc aaacgatggt 120
gggcttgacg ccgancactg caagggtgctc gtgaacattg agcagcagtc ccctgatatt 180
gctcagggtg tgcatggcca cttcaccaag cgccccgagg agattggagc tggtgaccag 240
ggacacatgt tcgggtatgc naccgatgag acccctgagt tgatgcccct cagccatgt 299

<210> 57
<211> 315
<212> nucleic acid
<213> Zea mays

<400> 57
acgatgtcgg gcttgacgct gaccactgca aggtgcttgt gaacattgag cagcagtccc 60
ctgatattgc tcagggtgtg cagggccact tcaccaagcg ccccgaggag attggagctg 120
gtgaccaggg gcacatgttt gggatatgca ctgacgagac ccctgagctg atgcccctca 180
gccatgtcct tgccaccaag cttggtgctc gtctcacggn gggtcgcaag aatggaacct 240
gcccctggct caggcccgat ggggaagacc aggtgacagt ggagtaccgc aacgaagggt 300
gcgcatgggt tccca 315

<210> 58

accat

305

<210> 61
<211> 300
<212> nucleic acid
<213> Zea mays

<400> 61

ggcctgcgag acctgcacca agaccaacat ggtgatggtg ttcggcgaga tcacgaccaa 60
ggcgaccgtg gactacgaga agatcgtgcg cgacacctgc cgcgagatcg ggttcacctc 120
cgncgacgtg ggcctcgacg ccgnccgctg caaggtgctg gtgaacatcg agcagcagtc 180
ccccgacatc ggcgagggcg tgcacgggca cttcacgnag cggnccgagg agatnggngc 240
gggcgaccag ggnacatgt tcgggtacgn caccgacgag acccccgagc tgatgccgct 300

<210> 62
<211> 558
<212> nucleic acid
<213> Zea mays

<400> 62

gnnnngtncc cnnnttnnnn tntttgncag nacncttntt cgctgcacg tactcggtcc 60
ggaattcccg ggtcgacca cgcgtccgcc caccgctccg cccacgcgtc cgcccacgcg 120
tcgccccacg cgtccgcca cgcgtccggc ctcttctccc tcttgccggt ccgaataaa 180
gagcagcagc gcaagaggtc ggtagagcga gaagaaggca atggcgggccg agagcttctt 240
tttcacctcg gagtccgtga acgaggggca ccccgacaag ctgtgcgacc aggtgtcgga 300
cgccgtgctt gacgcatgcc tcgcgagga ccccgacagc aaggtggcct gcgagacctg 360
caccaagacc aacatggtga tgggtgttcg cgagatcacg accaaggcga ccgtggacta 420
cgagaagatc gtgcgcgaca cctgccgcga gatcgggttc acctncgacg acgtgggcct 480
tnacgccnac cnntgcaagg tncgtggtgaa cattgagcaa naattccng gactttngc 540
anggcgttca cnggcant 558

<210> 63
<211> 332
<212> nucleic acid
<213> Zea mays

<400> 63

gccccctgggc tcaggcctga tgggaagacc caggtgacag tcgagtaccg caatgagggg 60
 ggtgccatgg tccccatccg tgtccacacc gtccatcatc ccaccagca cgacgagaca 120
 gtgaccaatg atgagatcgc tgcctgacctg aaggagcatg tcatcaagcc tgtcatccct 180
 gagcagtacc ttgacgagaa gaccatcttc caccttaacc catctggccg ctttgtcatg 240
 tggacctcac ggcatgctg gcctcactgg ccgcaagatc atcatgacac ctacggtggc 300
 tggggagccc atggtggtgg cgctttctcc gg 332

<210> 64

<211> 314

<212> nucleic acid

<213> Zea mays

<400> 64

ctcggagtct gtgaacgagg gacacctga caagctctgt gaccaggctc cagatgccgt 60
 tcttgacgct tgccttgctg aggacctga cagcaagggt gcttgagaga cctgcaccaa 120
 gaccaacatg gtcattggtt ttggtgagat caccaccaag gccaatgttg actacgagaa 180
 gattgtcagg gagacctgcc gcaacattgg ttttgtgtca aacgatgttg ggcttgacgc 240
 cgaccactgc aagtgtcgt gaacattnag cagcagtccc ctgatattgc tcanggtgtg 300
 catggccact tcac 314

<210> 65

<211> 293

<212> nucleic acid

<213> Zea mays

<400> 65

ggacgagaag accatcttcc acctcaacct gtcggggcgc ttctgcatcg gcgggcccc 60
 cggggacgcc ggctcaccg gccgcaagat catcatcgac acctacggcg gctggggagc 120
 ccacggcggg ggcgcttct ccggcaagga cccaccaag gtggaccgca gcggggccta 180
 cgctgccagg caggccgcca agagcatcgt ggccagcggc ttgcccgcgc gctgcctcgt 240
 gcaggtgtcc tacgccatcg ggtgccggag cccctgtccg tgttcgtcga etc 293

<210> 66

<211> 289
 <212> nucleic acid
 <213> Zea mays

 <400> 66

 gcaaggtggc ctgcgagacc tgcaccaaga cgaacatggt gatggtgttc ggcgagatca 60
 ccaccaaggc gagcgtggan tacgagaagn tcgtgcgcga cacctgccgc gagatcgggt 120
 tcacctccga cgacgtgggg ctgcagcccg accgctgcaa ggtgctggtg aacatcgagc 180
 agcagtcccc cgacatcgcg cagggcgtgc acgggcactt cacgaagcgg cccgaggaga 240
 tcggcgccgg cgaccagggc cacatgttcg ggtacgccac cgacgagac 289

<210> 67
 <211> 306
 <212> nucleic acid
 <213> Zea mays

 <400> 67

 gttgactacg agaagattgt cagggagacc tgccgcaaca ttggttttgt gtcaaacgat 60
 gttgggcttg acgcgacca ctgcaagggtg ctctggaaca ttgagcagca gtcccctgat 120
 attgctcagg gtgtgcatgg ccacttcacc aagcgccccg aggagattgg agctggtgac 180
 cagggacaca tgttcgggta tgcgaccgat gagaccctg agttgatgcc cctcagccat 240
 gtccttgcca ccaagctagg tgctcgtctc accgaggtcc gcaagaacgg aacctgcccc 300
 tggctc 306

<210> 68
 <211> 303
 <212> nucleic acid
 <213> Zea mays

 <400> 68

 tgacaagctc tgtgaccagg tctcagatgc cgttcttgac gcttgccctg ctgaggaccc 60
 tgacagcaag gttgcttggtg agacctgcac caagaccaac atgggtcatgg tcttttggtga 120
 gatcaccacc aaggccaatg ttgactacga gaagattgtc agggagacct gccgcaacat 180
 tggttttgtg tcaaacgatg ttgggcttga cgccgaccac tgcaagggtgc tcgtgaacat 240
 tgagcagcag tcccctgata ttgctcaggg tgnngcatggc cacttcacca agcgccccga 300

gga

303

<210> 69
<211> 300
<212> nucleic acid
<213> Zea mays

<400> 69

caaagaccaa catgggtcatg gtcttttggtg agatcaccac caaggccaat gtcgactacg 60
agaagattgt caggggagaca tgccgcaaca ttggtttcgt ntcgaacgat gtcggggcttg 120
acgctgacca ctgcaagggtg cttgtgaaca ttgagcagca gtccccctgat attgctcagg 180
gtgtncacgg ccacttcacc aagcgccccg aggagattgg agctgggtgac cagggggcaca 240
tgttttgggta tgcgactgac gagacccctg agctgatgcc cctcagccat gtccttgcca 300

<210> 70
<211> 329
<212> nucleic acid
<213> Zea mays

<400> 70

gatcaaagaa gatggcagct gtcgacacat tcctcttcac ctcgaggtct gtgaacgagg 60
gacaccctga caagctctgt gaccagggtct cagatgccgt tcttgacgt tgccttgctg 120
aggaccctga cagcaagggtt gcttgtgaga cctgcaccaa gaccaacatg gtcattggtct 180
ttggtgagat caccaccaag gccaatgttg actacgagaa gattgtcagg gagacctgcc 240
gcaacattgg ttttgtgtca aacgatgttg ggcttgacgc cgaccattgc aaggtgcncg 300
tgaanatnng cancagtcct ctgatattg 329

<210> 71
<211> 304
<212> nucleic acid
<213> Zea mays

<400> 71

gotgaggacc ctgacagcaa ggntgcttgc naganctgca ccaagaccaa catgggtcatg 60
gtcttttgng agatcaccac caaggccaat gtcgactacg agaagattgt caggggagaca 120
tgccgcaaca ttggtttcgt gtcgaacgan gtcggggcntg angctgacca ctgcaaggng 180

cttgtgaaca ttgagcagca gtccctgat attgtcagg gtgtgcacgg ccacttcacc 240
aagcgccccg aggagattgg agctgggtgac caggggcaca tgtttgggta tgcgactnac 300
gaga 304

<210> 72
<211> 307
<212> nucleic acid
<213> Zea mays
<400> 72

cgcttgccctt gctgaggacc ctgacagcaa ggttgcttgt gagacctgca ccaagaccaa 60
catggtcang gnccttttggg gagatcacca ccaaggocaa tgttgactac gagaagattg 120
tcaggagagac ctgccgcaac attgggttttg tgtcaaacga tgttgggctt gacgccgacc 180
actgcaaggt gctcgtgaac attgagcagc agtccctga tattgctcag ggtgtgcatg 240
gccacttcac caagcgcccc gaggagattg gagctgggtga ccagggacac atgttcgggt 300
atgcgac 307

<210> 73
<211> 282
<212> nucleic acid
<213> Zea mays
<400> 73

gccaccgacg agacccccga gctgatgccg ctgagccacg tgctggccac caagctcggc 60
gcgcgcctga cggaggtccg caaggacggc acctgcgcct ggctcaggcc cgacggcaag 120
accaggtga cgggtggagta cgtgaacgag ggcgggcgcca tgggtgcccggt ccgcgtgcac 180
accgtgctca tctccacca gcacgacgag accgtcacca acgacgagat cgccgccgat 240
ctcaaggagc acgtcatcaa gcccgtcac cgggagaggt ac 282

<210> 74
<211> 320
<212> nucleic acid
<213> Zea mays
<400> 74

caagcttgggt gctcgtctca cggaggttcg caagaatgga acctgcccct ggctcaggcc 60

cgatgggaag acccaggtga cagtggagta ccgcaacgag ggtggcgcca tggttcccat 120
ccgtgtgcac acagtctca tctctacca gcacgacgag acagtaccca acgacgagat 180
tgctgctgac ctgaaggagc acgtcatcaa gccagtcata cccgagcagt acctcgacga 240
gaagacaatc ttccacctca acccgtctgg ccgcttcgtc atcggcggac tcacggcgac 300
ctggcctcac tggccggaag 320

<210> 75
<211> 370
<212> nucleic acid
<213> Zea mays

<400> 75

agagcatcgt ggccagcggc ctgcgccgcc gctgcctcgt gcaggtgtcc tacgccatng 60
gcgtgccgga gccctgtca gtgttcgtcg actcctacgg caccgggacc atccccgaca 120
aggagatcct caagatcgtc aaggagaact tcgacttcag gcccgggatg atcaccatca 180
acctcgacct caagaagggc ggcaacaggt tcatcaagac cgcgcatac ggccactttg 240
gcgtgacga cgcgcacttc acctgggagg tggtaagcc cctaaagaag gcatccgctt 300
aagaatgtat tgggaagttc actggacatg aggttcattc tcgtctgggt ctgctgatac 360
ctgcaaggat 370

<210> 76
<211> 300
<212> nucleic acid
<213> Zea mays

<400> 76

atggaacctg cccctggctc aggcccgatg ggaagacca ggtgacagtg gagtaccgca 60
acgaggggtg cgcctatggt cccatccgtg tgcacacagt cctcatctct acccagcacg 120
acgagacagt caccaacgac gagattgctg ctgacctgaa ggagcacgtc atcaagccag 180
tcatccccga gcagtacctc gacgagaaga caatottcca cctcaaccgg tctggccgct 240
tcgtcatcgg cggacctcac ggcgacgctg gctcactgg ccggaagatc atcatcgaca 300

<210> 77
<211> 315
<212> nucleic acid

<213> Zea mays

<400> 77

ctcagatgcc gttcttgacg cttgccttgc tgaggaccct gacagcaagg ttgcttgtga 60
gacctgcacc aagaccaaca tggatcatggt ctttggtgag atcaccacca aggccaatgt 120
tgactacgag aagattgtca gggagacctg ccgcaacatt ggttttgtgt caaacgatgt 180
tgggcttgac gccgaccact gcaagggtgct cgtgaacatt gagcagcagt cccctgatat 240
tgctcagggg gtgcatggcc attcaccaag cgccccgang agattggagc tggtgaccag 300
gacacatggt cgggg 315

<210> 78

<211> 297

<212> nucleic acid

<213> Zea mays

<400> 78

ctcttcacct cggagttctgt gaacgagggg caccctgaca agctctgtga ccaggtctca 60
gatgccgttc ttgacgcttg ccttgctgag gaccctgaca gcaagggttgc ttgtgagacc 120
tgcaccaaga ccaacatggt catggtcttt ggtgagatca ccaccaaggc caatgttgac 180
tacgagaaga ttgtcagggg gacctgccgc aacattgggt ttgtgtcaaa cgatgttggg 240
cttgacgccg accactgcaa gtgctcgtga acattgagca gcagtccct gatattg 297

<210> 79

<211> 448

<212> nucleic acid

<213> Zea mays

<400> 79

ttggtgatgat caccaccaag gccaatgttg actacganaa gattgtgagg ganacctgtc 60
gcnacattgg ttttgtgtca aacgatgttg ggcttgacgc cgaccactgc aagggtgctcg 120
tgaacattna gcagnagtnc cctgatattg ctcanggtgt gcatggccac ttnaccaanc 180
gccccganga gattgganct ggtgaccagg gacacatggt cgggtatgcg accgatgaga 240
cccctnagtt gatgcccctc agccatgtcc ttgccacca gctaggtgct cgtctnaccg 300
aggtnencaa gaaccggaac ctgccnctgg ctcangcctg atnggaagac cnatgtgaca 360

gtcnantnnc gnaatgaagg gtggtgccat tgncccatc ctngtcaaca cggttcttat 420
 ttcaaccaag tnngacgagg acaatgac 448

<210> 80
 <211> 287
 <212> nucleic acid
 <213> Zea mays
 <400> 80

caccgtcctc atctccaccc agcacgacga gacagtgacc aatgatgaga tcgctgctga 60
 cctgaaggag catgtcatca agcctgtcat ccctgagcag taccttgacg agaagaccat 120
 cttccacctt aacctatctg gccgctttgt cattggtgga cctcacggcg atgctggcct 180
 cactggccgc aagatcatca ttgacaccta cgggtggctgg ggagcccatg gtggtggcgc 240
 tttctccggc aaggacccaa ccaaggttga ccgcagcgga gctatgt 287

<210> 81
 <211> 290
 <212> nucleic acid
 <213> Zea mays
 <400> 81

gcaatgaggg tggtgccatg gtcccatcc gtgtccacac cgtccctcatc tccaccacgc 60
 acgacgagac agtgaccaat gatgagatcg ctgctgacct gaaggagcat gtcacaaagc 120
 ctgtcatccc tgagcagtac cttgacgaga agaccatctt ccaccttaac ccatctggcc 180
 gctttgtcat tgggtggacct cagggcgatg ctggcctcac tggccgcaag atcatcattg 240
 acacctacgg tggctgggga gcccatggtg gtggcgcttt ctccggcaag 290

<210> 82
 <211> 287
 <212> nucleic acid
 <213> Zea mays
 <400> 82

tggacgcctg cctggcgag gaccccgaca gcaagggtggc ctgcgagacc tgcaccaaga 60
 cgaacatggt gatggtgttc ggcgagatca ccaccaaggc gagcgtggac tacgagaaga 120
 tcgtgcgcga cacctgccgc gagatcgggn nnacctccga cgacgtgggg ctcgacgccg 180

accgctgcaa ggtgctggtg aacatcgagc agcagtcgcc cgacatcgcg cagggcggtgc 240
acgggcactt cacgaagcgg cccgaggaga tcggcgccgg cgaccag 287

<210> 83
<211> 291
<212> nucleic acid
<213> Zea mays

<400> 83

atgccccca gccatgtcct tgccaccaag ctaggtgctc gtctcaccga ggtccgcaag 60
aacggaacct gcccctggct caggcctgat gggaagaccc aggtgacagt cgagtaccgc 120
aatgaggggtg gtgccatggt ccccatccgt gtccacaccg tcctcatctc caccagcac 180
gacgagacag tgaccaatga tgagatcgct gctgacctga aggagcatgt catcaagcct 240
gtcatccctg agcagtaact tgacgagaag accatcttcc accttaacct a 291

<210> 84
<211> 283
<212> nucleic acid
<213> Zea mays

<400> 84

tgccgctgag ccacgtgctg gccaccaagc tgggcgcgcg cctcaccgag gtgcgcaaga 60
acggcacctg cgcttggtg agggccgatc ggcaagaccc aggtgacggt ggagtacgtg 120
aacgagggcg gcgccatggt gcccgccgc gtgcacaccg tgctcatctc caccagcac 180
gacgagaccg tcaccaacga cgagatcgcc gccgacctca aggagcacgt catcaagccc 240
gtgatccctg agaagtacct cgacgagaag accatcttcc acc 283

<210> 85
<211> 274
<212> nucleic acid
<213> Zea mays

<400> 85

cgtgaacgag gggcaccg acaagctgtg cgaccagggt tcggacgccc tgcttgacgc 60
atgcctcgcg caggacccg acagcaaggt ggctgogag acctgcacca agaccaacat 120
ggtgatgggtg ttcggcgaga tcacgaccaa ggcgaccgtg gactacgaga agatcggtgc 180

cgacacctgc cgcgagatcg ggttcacctc cgacgacgtg ggccctcgaca ccgaccgctg 240
 caaggtgctg gtgaacatcg agcagcagtc cccc 274

<210> 86
 <211> 290
 <212> nucleic acid
 <213> Zea mays
 <400> 86

ggagcacgtc atcaagccag tcatccccga gcagtacctc gacgagaaga caatcttcca 60
 cctcaacccg tctggccgct tcgtcatngg cggacctcac ggcgacgctg gcctcaactgg 120
 ccggaagatc atcatcgaca cctacgggtg ctggggagcc cacggcgggg gcgccttctc 180
 cggcaaggac ccgaccaagg tggaccgcag cggggcctac gtcgagaggc aggctgccaa 240
 gagcatcgtc gccgcgggcc tcgcccgcng tgccatcgtc caggtctcct 290

<210> 87
 <211> 290
 <212> nucleic acid
 <213> Zea mays
 <400> 87

gtcgacacat tcctottcac ctoggagtct gtgaacgagg gacaccctga caagctctgt 60
 gaccaggtct cagatgccgt tottgacgct tgccttgctg aggaccctga cagcaagggt 120
 gcttgtgaga cctgcaccaa gaccaacatg gtcattggtct ttggtgagat caccaccaag 180
 gccaatgttg actacgagaa gattgtcagg gagacctgcc gcaacattgg ttttgtgtca 240
 aacgatgttg ggcttgacgc cgaccactgc aaggtgctcg tgaacattga 290

<210> 88
 <211> 288
 <212> nucleic acid
 <213> Zea mays
 <400> 88

gcggccgaga gcttcttttt cacctcggag tccgtgaacg aggggcaccc cgacaagctg 60
 tgcgaccagg tgtcggacgc cgtgcttgac gcatgcctcg cgcaggaccc cgacagcaag 120
 gtggcctgcg agacctgcac caagaccaac atggtgatgg tggtcggcga gatcacgacc 180

aaggcgaccg tggactacga gaagatcgtg cgcgacacct gccgcgagat cgggttcact 240
 ncgacgacgt gggcctcgac gccgaccgct gcaagnngct ngtgaact 288

<210> 89
 <211> 289
 <212> nucleic acid
 <213> Zea mays
 <400> 89

gcgactgacg agaccctga gctgatgcc ctcagccatg gtcccatcc gtgtgcacac 60
 agtcctcatc tctaccagc acgacgagac agtcaccaac gacgagattg ctgctgacct 120
 gaaggagcac gtcatacagc cagtcacccc cgagcagtac ctcgacgaga agacaatctt 180
 ccacctcaac ccgtctggcc gcttcgtcat cggcgagacct caccggcgacg ctggcctcac 240
 tggccggaag atcatcatcg acacctacgg tggctgggga gcccaacggc 288

<210> 90
 <211> 330
 <212> nucleic acid
 <213> Zea mays
 <400> 90

ccctcttgcc ggtcccgaaat aaagagcagc agcgcaagag gtcggtagag cgagaagaag 60
 gcaatggcgg ccgagagctt ccttttcacc tcggagtccg tgaacgaggg gcaccccgac 120
 aagctgtgcg accaggtgtc ggacgcctg cttgacgcat gcctcgcgca ggaccccgac 180
 agcaaggtgg cctgcgagac ctgcaccaag accaacaatgg tgatggtgtt cggcgagatc 240
 acgaccaagg cgaccgtgga ctacgagaag atcgtgcgcg acacctgccg cgagatcggg 300
 ttcacctccg acgacgtggg cctcgacgcc 330

<210> 91
 <211> 291
 <212> nucleic acid
 <213> Zea mays
 <400> 91

gtgctcgtct caccgaggtc cgcaagaacg gaacctgccc ctggctcagg cctgatggga 60
 agaccaggt gacagtcgag taccgcaatg aggggtggtgc catgggtccc atccgtgtcc 120

acaccgtcct catctccacc cagcacgacg agacagtgac caatgatgag atcgctgctg 180
acctgaagga gcatgtcatc aagcctgtca tccctgagca gtaccttgac gagaagacca 240
tctttcacct taacccatct ggccgctttg tcattggtgg acctcacggc g 291

<210> 92
<211> 285
<212> nucleic acid
<213> Zea mays

<400> 92

gccagcggcc tcgcccgcg ctgcctcgtg caggtgtcct acgccatcgg cgtgccggag 60
cccctgtccg tgttcgtcga ctctacggc accgggacca tccccgacaa ggagatccta 120
aagatcgtca aggagaactt cgacttcagg ccagggatga tcaccatcaa cctcgacctc 180
aagaagggcg gcaacagggt catcaagacc gccgcatacg gccactttgg ccgtgacgac 240
gccgacttca cctgggaggt ggtcaagccc ctaaagaagg catcc 285

<210> 93
<211> 283
<212> nucleic acid
<213> Zea mays

<400> 93

ggccacttca ccaagcggcc cgaggagatt ggagctggtg accagggaca catgttcggg 60
tatgcgaccg atgagacccc tgagttgatg cccctcagcc atgtccttgc caccaagcta 120
ggtgctcgtc tcaccgaggt ccgcaagaac ggaacctgcc cctggctcag gcctgatggg 180
aagaccagg tgacagtcca gtaccgcaat gaggggtggtg ccatgggtccc catccgtgtc 240
cacaccgtcc tcatctccac ccagcacgac gagacagtga cca 283

<210> 94
<211> 298
<212> nucleic acid
<213> Zea mays

<400> 94

actacgagaa gattgtcagg gagacatgcc gcaacattgg tttcgtgtcg aacgatgtcg 60
ggcttgacgc tgaccactgc aaggtgcttg tgaacattga gcagcagtc cctgatattg 120

ctcagggtgt gcacggccac ttcaccaagc gccccgagga gattggagct ggtgaccagg 180
ggcacatgtt tgggtatgcn actgacgaga cccctgagct gatgcccctc agccatgtcc 240
ttgccaccaa gcttgggtgtc gtctcacnga aggttcgcaa gaatggaacc tgccccnt 298

<210> 95
<211> 469
<212> nucleic acid
<213> Zea mays

<400> 95

cttctccctc ttgccggtcc cgaataaaga gcagcagcgc aagaggtcgg tagagcgaga 60
agaaggcaat ggcggccgag agcttccttt tcacctcgga gtccgtgaac gaggggcacc 120
ccgacaagct gtgcnaccag gtgtcggacg ccgtgcttga cncatgcctc gcgcaggacc 180
ccnacagcaa ggtggcctgc nagacctgca ccaanaccaa catggtgatg gtgttcggcg 240
agatcacgac caangcgacc gtggactacg agaagatcgt gcgccgacac ctgccgcgag 300
atcgggttca ccttcgnega cgtgngccct tgactccnnc ccggtgcaag gtgctggtga 360
acattnatca tcaatncccc gacattnntc aaggcnttca cggcacttta cgaaacggcc 420
cnangagatc ggccggggcca acagngccac atnttcgggt ccccccca 469

<210> 96
<211> 293
<212> nucleic acid
<213> Zea mays

<400> 96

aacgatgttg ggcttgacgc cgaccactgc aaggtgctcg tgaacattga gcagcagtcc 60
cctgattgct caggggtgtgc atggccaactt caccaagcgc cccgaggaga ttggagctgg 120
tgaccagggg cacatgttcg ggtatgcnac cgatgagacc cctgagttga tgccccctcag 180
ccatgtcctt gccaccaagc taggtgctcg tctcaccgag gtccgcaaga acggaacctg 240
cccctggctc aggctgatg ggaagaccca ggtgacagtc gagtaccgca aaa 293

<210> 97
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 97

cggnacgntg gcgtgaacga ggggcaccca gacaagctgt gcgaccaggt gtcggacgcg 60
gtgctggacg cctgcctggc gcagganccc gacagcaagg tggcctgcga gacctgcacc 120
aagacgaaca tggatgatggg gttcggcgag atcaccacca aggcgagcgt ggactacgag 180
aagatcgtgc gcgacacctg ccgcgagatc ggggttcacct ccgacgacgt ggggctcgac 240
gccgaccgct gcaagggtgct ggtgaacatc gagcagcagt 280

<210> 98

<211> 285

<212> nucleic acid

<213> Zea mays

<400> 98

catggtggtg gcgctttctc cggcaaggac ccaaccaagg ttgaccgcag cggagcctat 60
gtcgcgagggc aggotgccaa gagcatcgtc gccagcggcc ttgctcgccg cgccatcgtc 120
caggtgtctt acgccatcgg cgtgcccagag cctctctccg tgttcgtcga cacgtacggc 180
accggcgcga tccccgacaa ggagatcctc aagattgtca aggagaactt cgatttcagg 240
cctggcatga tcatcatcaa ccttgacctc aagaaaggcg gcaag 285

<210> 99

<211> 278

<212> nucleic acid

<213> Zea mays

<400> 99

aggtgacagt cgagtaccgc aatgaggggtg gtgccatggt ccccatncgt gtccacaccg 60
tcctcatctc caccagcac gacgagacag tgaccaatga tgagatcgt gctgacctga 120
aggagcatgt catcaagcct gtcatncctg agcagtacct tgacgagaag accatcttcc 180
accttaaccc atctggccgc tttgtcattg gtggacctca cggcgatgct ggctcactg 240
gccgcaagat catcattgac acctacgggtg gctgggga 278

<210> 100

<211> 275

<212> nucleic acid

<213> Zea mays

<400> 100

gtgaccaatg atgagatcgc tgctgacctg aaggagcatg tcatcaagcc tgtcatccct 60
gagcagtacc ttgacgagaa gaccatcttc caccttaacc catctggccg ctttgtcatt 120
ggtggacctc acggcgatgc tggcctcact ggccgcaaga tcatcattga cacctacggt 180
ggctggggag cccatgggtg tggcgctttc tccggcaagg acccaaccaa ggttgaccgc 240
agcgganccct atgtcgcaag gcaggctgcc aagag 275

<210> 101

<211> 291

<212> nucleic acid

<213> Zea mays

<400> 101

gatcgctgct gacctgaagg agcatgtcat caagcctgtc atccctgagc agtaccttga 60
cgagaagacc atcttccacc ttaaccatc tggccgcttt gtcattgggtg gacctcacgg 120
cgatgctggc ctcaactggc gcaagatcat cattgacacc tacggtgggt ggggagccca 180
tggtgggtggc gctttctccg gcaaggaccc aaccaagggt gaccgcagcg gaggcctatgt 240
cgcaaggcag gctgccaaga gcatcgctgc cagcggtttg ctgcgcgcgc c 291

<210> 102

<211> 301

<212> nucleic acid

<213> Zea mays

<400> 102

agaagatggc cggactcgac accttccctc tcacctcgga gtccgtgaac gagggacacc 60
ctgacaagct ctgcgaccag gtctcagatg ctgttctgga cgcttgccctg ctgaggaccc 120
tgacagcaag gttgcttgcg agacctgcac caagaccaac atgggtcatgg tctttgggtga 180
gatcaccacc aaggccaatg tcgactacga gaagattgtc agggagacat gccgcaacat 240
tggtttcgtg tcgaacgatg tcgggcttga cgctgaccac tgcaagtgt tgtgaacatt 300
g 301

<210> 103

<211> 336

<212> nucleic acid

<213> Zea mays

<400> 103

ctccctcttg ccggtccoga ataaagagca gcagcgcaag aggtcggtag agcgagaaga 60
aggcaatggc ggccgagagc ttcccttttna cctcggagtc cgtgaaacga ggggcncccc 120
gacaagctgt gcgaccaggt gtcggacgcc gtgcttgacg catgcctcgc gcaggacccc 180
gacagcaagg tggcctgcga gacctgcacc aagaccaaca tggatgatgt gttcggcgag 240
atcacgacca aggcgaccgt ggactacgag aagatcgtgc gcgacacctg ccgcgagatc 300
gggttcacct ccgacgacgt gggcctcgac gccgac 336

<210> 104

<211> 276

<212> nucleic acid

<213> Zea mays

<400> 104

tgagaagtac ctcgacgaga agaccatctt ccacctcaac ccgtccgggc gcttcgtcat 60
cggcggggccc caccgtgacg ccggcctcac cggccgcaag atcatcatcg acacgtacgg 120
cggtcgggga gccacggcg gtggcgccct ctcgggcaag gacccacca aggtggaccg 180
cagcggcgcc tacgtggcca ggcaggccgc caagagcatc gtggccagcg gctcggccgc 240
cgctgcctcg tgcagtgtcg taagccatcg ctgcgc 276

<210> 105

<211> 287

<212> nucleic acid

<213> Zea mays

<400> 105

gagattggag ctggtgacca gggacacatg ttcgggtatg cgaccgatga gaccctgag 60
ttgatgcccc tcagccatgt ccttgccacc aagctaggtg ctcgtctcac cgagggtccgc 120
aagaacggaa cctgccccctg gctcaggcct gatgggaaga ccaggtgac agtcgagtac 180
cgcaatgagg gtggtgccat ggtcccccac cgtgtccaca ccgtcctcat ctccaccag 240
cacgacgaga cagtgaccaa tgatgagatc gtgctgacct gaaggag 287

<210> 106

<211> 303
 <212> nucleic acid
 <213> Zea mays

 <400> 106

 accgtcctca tctccacca gcacgacgag acagtgacca atgatgagat cgctgctgac 60
 ctgaaggagc atgtcatcaa gcctgtcatc cctgagcagt accttgacga gaagaccatc 120
 ttccacctta acccatctgg ccgctttgtc attggtggac ctcacggcga tgctggcctc 180
 actggccgca agatcatcat tgacacctac ggtggctggg gagcccatgg tgggtggcgt 240
 ttctccggca aggaccaaac caagttgacc gcagcgganc tatgtcgcaa ggcagctgcc 300
 aag 303

<210> 107
 <211> 279
 <212> nucleic acid
 <213> Zea mays

 <400> 107

 gtgaccaggt ctcagatgcc gttcttgacg cttgccttgc tgaggaccct gacagcaagg 60
 ttgcttgtga gacctgcacc aagaccaaca tggatcatggt ctttgggtgag atcaccacca 120
 aggccaatgt tgactacgag aagattgtna gggagacctg ccgcaacatt ggttttgtgt 180
 caaacgatgt tgggcttgac gccgaccact gcaaggtgct cgtgaacatt gagcagcagt 240
 cccctgatat tgctcagggt gtgcatggcc acttcacca 279

<210> 108
 <211> 330
 <212> nucleic acid
 <213> Zea mays

 <400> 108

 ctctttctccc tcttgccggt cccgaataaa gagcagcagc gcaagaggtc ggtagagcga 60
 gaagaaggca atggcggccg agagcttctt ttacacctcg gagtccgtga acgaggggca 120
 ccccgacaag ctgtgcgacc aggtgtcgga cgcgctgctt gacgcatgcc tcgcgagga 180
 ccccgacagc aaggtggcct gcgagacctg caccaagacc aacatggtga tgggtgttcgg 240
 cgagatcacg accaaggcga ccgtggacta cgagaagatc gtgcgagaca cctgccgcga 300

gatcgggttc acctccgacg acgtgggcct

330

<210> 109
<211> 298
<212> nucleic acid
<213> Zea mays

<400> 109

ccgacggcaa gaccaggtg acggtggagt acgtgaacna nggcggcgcc atggtgcccg 60

tccgntgca caccgtgctc atctccaccc agcacgacga gaccgtcacc aangacgagn 120

tcgccgcgn cctcanggag caggtentna agcccgatcat cccgganagg tacctggacg 180

anaagacctt cttncacctc aaccggtcgg gggcgnttcg tcttcggcgg gccccacggg 240

gacnccggcc tnaccggccg caagntgntc ntngncacct acngcggntg gggagccc 298

<210> 110
<211> 498
<212> nucleic acid
<213> Zea mays

<400> 110

cccctctttt gcctatccgg gccgacccac gcgnacgcg gnggctcngn gcgtatcgag 60

cccacggatt ttggntctn ctccggcaag gacccaccn nggtgggggn gnattgggnc 120

ctaccgtcgc caggcangcc gacaagagca tngnggccag cggcctcgn cggcgntgcc 180

tcgngcaggt gtcctacgcc atcggcgtgc cggagcccct gtccgtgttc gtngactcct 240

acggcaccgg gaccatcccc gacaaggaga tcctaaagat cgtnaaggag aacttcgact 300

tcaggccagg gatggtcacc atcaacctcg acctcaagaa gggcggcaac aggttcatca 360

agaccgcgn atacggccac tttggcccg gacgacgcg acttcacctg ggaggtggtc 420

aagcccctaa agaaggcatc cgcttaagaa tgtattnga aagttcactg gacatgaagg 480

atcatcttcc tctnggct 498

<210> 111
<211> 284
<212> nucleic acid
<213> Zea mays

<400> 111

gccgcagat caaagaagat ggcagctgtc gacacattcc tcttcacctc ggagtctgtg 60
 aacgagggac accctgacaa gctctgtgac caggtctcag atgccgttct tgacgcttgc 120
 cttgctgagg accctgacag caaggttgct tgtgagacct gcaccaagac caacatggtc 180
 atggtctttg gtgagatcac caccaaggcc aatgttgact acgagaagat tgtcagggag 240
 acctgccgca acattggttt tgtgtcaaac gatgttgggc ttga 284

<210> 112
 <211> 328
 <212> nucleic acid
 <213> Zea mays

<400> 112

ggcgagatca cgaccaaggc gaccgtggac tacgagaaga tcgtgcgcga cacctgccgc 60
 gagatcgggt tcacctccga cgacgtgggc ctgcacgccg accgctgcaa ggtgctgggtg 120
 aacatcgagc agcagtcccc cgacatcgcg cagggcgtgc acgggcactt cacgaagcgg 180
 cccgaggaga tcggcgcggg nnaccagggc cacatgttcg ggtacgccac cgacgagacc 240
 cccgagctga tgccgctgag ccaacgtgct ggccaacaag ctgggcgcgg ggctcaccga 300
 ngtgcgaaaa acggcaactg cgctggct 328

<210> 113
 <211> 287
 <212> nucleic acid
 <213> Zea mays

<400> 113

gggggcgctt tctccggcaa ggacccgacc aaggtggacc gcagcggggc ctacgtcgcg 60
 aggcaggctg ccaagagcat cgtcgccgcc ggctcgccc gccgcgccat tgtccaggtc 120
 tctacgcca tcggcgtgcc cgagcccctt tcggtgttcg tggacacgta cggcaccggc 180
 gccatccccg acaaggagat cctgaagatc gtgaaggaga acttcgactt caggccccgc 240
 atgatcatca tcaacctcga cctcaagaaa ggcggcaacg ggcgcta 287

<210> 114
 <211> 261
 <212> nucleic acid
 <213> Zea mays

<400> 114

cgacgccgaa ccgctgcaag gtgctggtga acatcgagca gcagtcccc gacatcgcg 60

agggcgtgca cgggcacttc acgaagcggc ccgaggagat cggcgcgggc gaccagggcc 120

acatgttcgg gtacgccacc gacgagaccc ccgagctgat gccgtgagc cacgtgctgg 180

ccaccaagct gggcgcgcg ctcaccgagg tgcgcaagaa cggcacctgc gcctggctga 240

ggcccgcagg caagaccag g 261

<210> 115
 <211> 294
 <212> nucleic acid
 <213> Zea mays

<400> 115

gggccacttc accaagcgcc ccgaggagat tggagctggt gaccagggac acatgttcgg 60

gtatgcgacc gatgagaccc ctgagttgat gcccctcagc catgtccttg ccaccaagct 120

aggtgctcgt ctcaccgagg tccgcaagaa cggaanctgc ccctggctca ggctgatgg 180

gaagaccag gtgacagtcg agtaccgcaa tgaggggtgg gccatggtcc ccatccgtgt 240

ccacaccgtc ctcatctcca ccagcacga cgagacatga ccaatgatga gatc 294

<210> 116
 <211> 318
 <212> nucleic acid
 <213> Zea mays

<400> 116

ctgaaggagc acgtcatcaa gccagtcac cccgagcagt acctcgacga gaagacaatc 60

ttccacctca acccgtctgg ncgcttcgtc atcggcggac ctacggcga cgccggcctc 120

actggccgga agatcatcat cgacacctac ggtggctggg gagccacgg cgggggcgcc 180

ttctccggca aggacccgac caangtggac cgcagcgggg cctacgtcgc gangcaggct 240

gccaagagca tcgtcgccgc cggcctcgcc gngcgccat cgtccaggtc tctagcatgg 300

gtgccgancc tatcgtgt 318

<210> 117
 <211> 256
 <212> nucleic acid

<213> Zea mays
 <400> 117
 gagaagtacc tcgacgagaa gaccatcttc cacctcaacc cgtccgggcg cttcgtcatc 60
 ggcgggcccc acggtgacgc cggcctcacc ggccgcaaga tcatcatcga cacgtacggc 120
 ggctggggag cccacggcgg tggcgcttc tccggcaagg accccaccaa ggtggaccgc 180
 agcggcgctt acgtggccag gcaggccgcc aagagcatcg tggccagcgg cttcgcccgc 240
 cgctgccttc tgcaag 256

<210> 118
 <211> 275
 <212> nucleic acid
 <213> Zea mays
 <400> 118
 gtcgacacat tcctcttcac ctcgaggtct gtgaacgagg gacaccctga caagctctgt 60
 gaccaggtct cagatgccgt tcttgacgct tgccttgctg aggaccctga cagcaagggt 120
 gcttgtgaga cctgcaccaa gaccaacatg gtcatgggtct ttggtgagat caccaccaag 180
 gncnatgttg actacgagaa gattgtcagg gagacctgcc gcaacattgg ttttgtgtca 240
 aacgatgttg ggcttgacgc cgaccactgc aaggt 275

<210> 119
 <211> 276
 <212> nucleic acid
 <213> Zea mays
 <400> 119
 gtcgacacat tcctcttcac ctcgaggtct gtgaacgagg gacaccctga caagctctgt 60
 gaccaggtct cagatgccgt tcttgacgct tgccttgctg aggaccctga cagcaagggt 120
 gcttgtgaga cctgcaccaa gaccaacatg gtcatgggtct ttggtgagat caccaccaag 180
 gccattgttg actacgagaa gattgtcagg gagacctgcc gcaacattgg ttttgtgtca 240
 aacgatgttg ggcntgacgc cgaccactgc aaggtg 276

<210> 120
 <211> 309
 <212> nucleic acid

<213> Zea mays

<400> 120

cggcacggtg gtcgcagcat cgctgctgac ctgaaggagc atgtcatcaa gcctgtnatc 60
cctgagcagt accttgacga gaagaccatn ttccacctta acccatctgg ccgctttgtc 120
attggtggac ctacggcgga tgctggcctc actggccgca agatcatcat tgacacctac 180
ggtggctggg gagcccatgg tgggtggcgct ttctccggca aggacccaac caaggttgac 240
cgacagcgag cctatgtcgc aangcangct gccaaagagca tcgtcgccaa cggcttgctc 300
gccgcgcca 309

<210> 121

<211> 267

<212> nucleic acid

<213> Zea mays

<400> 121

ctcagggtgt gcatggccac ttcaccaagc gccccgagga gattggagct ggtgaccagg 60
gacacatgtt cgggtatgcg accgatgaga cccctgagtt gatgcccctc agccatgtcc 120
ttgccaccaa gctaggtgct cgtctcaccg aggtccgcaa gaacggaacc tgcccctggc 180
tcaggcctga tgggaagacc cagggtgacag tcgagtaccg caatgagggg ggtgccatgg 240
tccccatccg tgtccacacc gtcctca 267

<210> 122

<211> 277

<212> nucleic acid

<213> Zea mays

<400> 122

gcaaggtgct tgtgaacatt gagcagcagt cccctgatat tgctcagggt gtgcacggcc 60
acttcaccaa gcgccccgag gagattggag ctggtgacca ggggcacatg tttgggtatg 120
cgactgacga gaccctgag ctgatgcccc tcagccatgt ccttgccacc aagcttggtg 180
ctcgtctcac ggaggttcgc aagaatggaa cctgcccctg gctcaggccc gatgggaaga 240
cccagtgaca attggantac cgcaacgagg gtggccc 277

<210> 123

<211> 264
 <212> nucleic acid
 <213> Zea mays

 <400> 123

 gccacatggt cgggtacgcc accgacgaga ccccgagct gatgccgctg agccacgtgc 60
 tggccaccaa gctggggcgcg cgcctcaccg aggtgcgcaa gaacggcacc tgcgcctggc 120
 tgaggcccgga cggcaagacc caggtgacgg tgaggtacgt gaacgagggc ggcgccatgg 180
 tgcccgtccg cgtgcacacc gtgctcatct ccaccagca cgacgagacc gtcaccaacg 240
 acgagatcgc ccgccgacct caag 264

<210> 124
 <211> 269
 <212> nucleic acid
 <213> Zea mays

 <400> 124

 gaagattgtc agggagacct gccgcaacat tggttttgtg tcaaacgatg ttgggcttga 60
 cgccgaccac tgcaaggtgc tcgtgaacat tgagcagcag tccctgata ttgctcaggg 120
 tgtgcatggc cacttcacca agcgccccga ggagattgga gctggtgacc agggacacat 180
 gttcgggtat gcgaccgatg agaccctga gttgatgcc ctcagccatg tccttgccac 240
 caagctaggt gctcgtctca ccgaggtcc 269

<210> 125
 <211> 274
 <212> nucleic acid
 <213> Zea mays

 <400> 125

 atgccgctga gccacgtgct ggccaccaag ctgggcgcgc gnetcaccga ggtgcgcaag 60
 aacggcacct gcgcctggct gaggccccgac ggcaagacct aggtgacggt ggagtacgtg 120
 nacgagggcg gcgccatggt gcccgccgc gtgcacaccg tgctcatctc cacncancan 180
 gnngngntng tcaccaacna cgagatcgcc gccgacctca aggagcacgt catcaagccc 240
 gtgatccctg agaagtacct cgacgagaag acca 274

<210> 126

<211> 260
 <212> nucleic acid
 <213> Zea mays

<400> 126

ggaccctgac agcaagggttg cttgcgagac ctgcaccaag accaacaatgg tcatggncctt 60
 tgggtgagatc accaccaagg ccaatgtcga ctacgagaag attgtcaggg agacatgccg 120
 caacattgggt ttcgtgtcga acgatgtcgg gcttgacgct gacctatgca aggtgcttgt 180
 gaacattgag cagcagtccc ctgatattgc tcagggtgtg cacggccact tcaccaagcg 240
 ccccgaggag attggagctg 260

<210> 127
 <211> 516
 <212> nucleic acid
 <213> Zea mays

<400> 127

gnnnaaagga gatttgatan gntttntggg gaggnanagn tnatgccgta ccggtccgga 60
 attcccgggt cgacccacgc gtccggagaa gaccatcttc cacctcaacc cgtccggggcg 120
 cttcgtcatc ggcgggcccc aggggtgacgc cggcctcacc ggccgcaaga tcatcatcga 180
 cacgtacggc ggctggggag cccacggcgg tggcgcccttc tccggcaagg accctaccaa 240
 ggtggaccgc agcggcgccct acgtggccag gcaggccgnt cangagcatc gtggccagcg 300
 gctcncocg ccgtgncctc gtgcaggtgt cgtacgcnat cggcgtgcac ggagcccntg 360
 tatcgtattc gtaactcgta cggaacnggn acgatncnng anaaggatat actanangat 420
 agtgaaggag aantnntnct tnatgcnnnn gttgatnagg atnnaanntn nannngnnna 480
 angttnnnnn nnggnnnatt nnnnantntn nnnnta 516

<210> 128
 <211> 264
 <212> nucleic acid
 <213> Zea mays

<400> 128

ggagcatgtc atcaagcctg tcatccctga gcagtacctt gacgagaaga ccatcttcca 60
 ccttaaccca tctggccgct ttgtcattgg tggacctcac ggcgatgctg gcctcactgg 120

ccgcaagatc atcattgaca cctacggtgg ctggggagcc catggtggtg gcgctttctc 180
 cggcaaggac ccaaccaagg ttgaccgcag cggagcctat gtcgcaangc aggctgccaa 240
 gagcatcgtc gccagcggcc ttgc 264

<210> 129
 <211> 270
 <212> nucleic acid
 <213> Zea mays

<400> 129

caagaatgga acctgcccct ggctcaggcc cgatgggaag acccagggtga cagtggagta 60
 ccgcaacgag ggtggcgcca tggttcccat ccgtgtgcac acagtcctca tctctaccca 120
 gcacgacgag acagtcacca acgacgagat tgctgctgac ctgaaggagc acgtcatcaa 180
 gccagtcatc cccgagcagt acctcgacga gaagacaatc ttccacctca acccgtctgg 240
 ccgcttcgtc atcggcgggac ctcacggcga 270

<210> 130
 <211> 249
 <212> nucleic acid
 <213> Zea mays

<400> 130

cacgtcatca agcccgtgat ccctgagaag tacctcgacg agaagacat cttccacctc 60
 aaccggtccg ggcgcttcgt catcggcggg cccacgggtg acgcgggcct caccggccgc 120
 aagatcatca tcgacacgta cggcggtggtg ggagcccacg gcggtggcgc cttctccggc 180
 aaggacccca ccaagggtgga ccgcagcggc gcctacgtgg ccaggcaggc cgccaagagc 240
 atcgtggcc 249

<210> 131
 <211> 270
 <212> nucleic acid
 <213> Zea mays

<400> 131

gtcatcaagc ctgtcatccc tgagcagtac cttgacgaga agaccatctt ccaccttaac 60
 ccatctggcc gctttgttat tgggtggacct cacggcgatg ctggcctcac tggccgcaag 120

acttaccaag cgccccgagg agattggagc tggtgaccag gggcacatgt ttgggtatgc 180
gactgacgag acccctgagc tgatgcccct cagccatgtn cttgccacca agcttggtgc 240
tcgtctnaca aangntcgca agaaatggaa cctggcccct ggcttaagcc cgatnggnaa 300
gacccaagtg acaagtggaa tanccgnaac caagggtggc nccatggggtt cccattcgtg 360
tgcacacaag tccttaattt ttaccaaca ccgaccaagg ccagttancc aacgaccagg 420
anttggcnt 429

<210> 135
<211> 282
<212> nucleic acid
<213> Zea mays

<400> 135

atcggcgggc cccacggtga cgccggcctc accggccgca agatcatcat cgacacgtac 60
ggcggctggg gagcccacgg cggcggcgcn ttctccggca aggacccac caagggtggac 120
cgcagcggcg cntacgtggc caggcaggcc gccaaagagca tcgtngccag cngctcgnc 180
gccngtgcnt ngtgcaggtg tcgtacgcca tcggtgccg gagcccctgt ccgtgttngt 240
caactcgtac ggcnegggca cgntccccga caaggagntc tc 282

<210> 136
<211> 279
<212> nucleic acid
<213> Zea mays

<400> 136

gtgatggtgt tcggcgagat cagaccaag gcgaccgtgg actacgagaa gatcgtgcgc 60
gacacctgcc gcgagatcgg gttcacctcc gacgacgtgg gcctcgacgc cgaccgctgc 120
aaggctgctgg tgaacatcga gcagcagtc cccgacatcg cgcagggcgt gcacgggcat 180
tcacgaagcg gcccaggag atcggcgcg gcgaccagg ccacatgttc gggtagcca 240
ccgacgagac ccccgagtga tgccgtnagc natgtgngc 279

<210> 137
<211> 283
<212> nucleic acid
<213> Zea mays

<400> 137

ctgagaagta cctcgacgag aagaccatct tccacctcaa cccgtccggg cgcttcgtca 60
ttggcggggc ccaaggtgaa ggcgggctta acgggcggaa annntnntcat cganacgnan 120
ggcggttggg gagcccaagg cggtggcgcn ttctccggca aggacccac caaggtggac 180
cgcagcggcg cctacgtggc caggcaggcc gccaaagagca tcgtggccag cggttcgcc 240
cgcngctgcc tcgtgcaggt gtcgtacgcc atcgggtgcc gga 283

<210> 138

<211> 297

<212> nucleic acid

<213> Zea mays

<400> 138

cggaentggn gaaaggagca cgtcatcaag ccagtcattc ccgagcagta cctcgacgag 60
annntcaatc ttccacctca acccgctctgg ccgcttcgtc atcggcgagc ctacacggca 120
cgctggcctc actggccgga agatcatcat cgacacctac ggtggctggg gagcccaagg 180
cgggggcgcc ttctccggca aggacccgac caaggtggac cgcagcgggg cctacgtcgc 240
gaggcaggct gccaaagagca tcgtcgccgc ggctcgccc gccgcgcatt gtccagt 297

<210> 139

<211> 317

<212> nucleic acid

<213> Zea mays

<400> 139

ctccctcttg ccggtcccga ataaagagca gcagcgcaag aggtcggtag agcgagaaga 60
aggcaatggc ggccgagagc ttctttttca cctcggagtc cgtgaacgag gggcaccgca 120
caagctgtgc gaccaggtgt cggacgccgt gcttgacgca tgctcgcgc aggacccgca 180
cagcaagggtg gcctgcgaga cctgcaccaa gaccaacatg gtgatggtgt tcggcgagat 240
cacgaccaag gcgaccgtgg actacgagaa gatcgtgcgc gacacctgcc gcgagatcgg 300
gttcacctcc gacgacg 317

<210> 140

<211> 277

<212> nucleic acid

<213> Zea mays

<400> 140

cgctgcctcg tgcaggtgtc gtacgccatc ggcgaggcg gagccctgt ccgtgttcgt 60
caactcgtag ggcaccggca cgatccccga caaggagatc ctcaagatcg tgaaggagaa 120
cttcgacttc aggcccgga tgatcagcat caacctcgac ctgaagaagg gcggcaacag 180
gttcatcaag accgcgcct acggccaatt cggccgtgac gacgccgact tcacctggga 240
ggtggtgaag cccctcaagt tcgacaaggc atcgctt 277

<210> 141

<211> 279

<212> nucleic acid

<213> Zea mays

<400> 141

ccgagcctct ctccgtgttc gtcgacacgt acggcaccgg cgcgatcccc gacaaggaga 60
tcctcaagat tgtcaaggag aacttcgatt tcaggcctgg catgatcatc atcaaccttg 120
acctcaagaa aggcggcaac gggcgctacc tcaagacggc ggccctacggc cactttggaa 180
gggacgacct tgacttcacc tgggaggtgg tgaagccact caagtcggag aaaccttctg 240
cctaaggcgg cctttttttc agtaagaagc ttttggtgg 279

<210> 142

<211> 263

<212> nucleic acid

<213> Zea mays

<400> 142

caaggttgac cgcagcggag cctatgtcgc aaggcaggct gccaaagagca tcgtcgccag 60
cngccttgct cgccgcgcca tcgtccaggt gtcttacgcc atcggcgtgc ccgagcctct 120
ctccgtgttc gtcgacacgt acggcaccgg cgcgatcccc gacaaggaga tcctcaagat 180
tgtcaaggag aacttcgatt tcaggcctgg catgatcatc atcaaccttg acctcaagaa 240
aggcggcaac gggcgctacc tca 263

<210> 143

<211> 287

<212> nucleic acid

<213> Zea mays

<400> 143

cgatcatcaag ccagtcattcc ccgagcagta cctcgacgag aagacaatct tccacctcaa 60
cccgtctggc cgtttcgtca tcggcggacc tcacggcgac gccggcctca ctggccggaa 120
gatcatcatc gacacctacg gtggctgggg agcccacggc gggggcgctt tctccggcaa 180
ggacccgacc aaggtggacc gcagcggggc ctacgtcgcg aggcaggctg ccaagagcat 240
cgtcgccgcc gcccttcgcc cgcngcgcca tcgtccaggt ctctaag 287

<210> 144

<211> 280

<212> nucleic acid

<213> Zea mays

<400> 144

ggccacttca ccaagcgcgc cgaggagatt ggagctgntg accagggaca catgttcggg 60
tatgcgaccg atgagacccc tgagttgatg cccctcagcc atgtccttgc caccaagcta 120
gggtgctcgtc tcaccgaggt ccgcaagaac ggaacctgcc cctggctcag gcctgatggg 180
aagaccaggt tgacagtcga gtaccgcaat gaggggtggtg ccatgggtccc catccgtgtc 240
cacaccgtcc tcattctccac ccgcacgacg agacagtgc 280

<210> 145

<211> 251

<212> nucleic acid

<213> Zea mays

<400> 145

ttcacctccg acgacgtggg cctcgacgcc gaccgtgca aggtgctggg gaacatcgag 60
cagcagtccc ccgacatcgc gcaggcgctg cacgggcaact tcacgaagcg gcccgaggag 120
atcggcgcgg gcgaccaggg ccacatgttc gggtagcga ccgacgagac ccccgagctg 180
atgccgtga gccacgtgct ggccaccaag ctgggcgcgc gcctcaccga ggtgcgcaag 240
aacggcaactg g 251

<210> 146

<211> 270

<212> nucleic acid

Sequence 146-149

<213> Zea mays

<400> 146

atggtcccca tccgtgtcca caccgtcctc atctccaccc agcacgacga gacagtgacc 60
aatgatgaga tcgctgctga cctgaaggag catgtcatca agcctgtcat ccctgagcag 120
taccttgacg agaagaccat ctccacctt aacctatctg gccgctttgt cattgggtgga 180
cctcacggcg atgctggcct cactggccgc aagatcatca ttgacaccta cggtggtctgg 240
ggagcccatg gtggtggcgt ttctccggca 270

<210> 147

<211> 310

<212> nucleic acid

<213> Zea mays

<400> 147

agacctgccg caacattggt tttgtgtcaa acgatgttgg gcttgacgcc gaccactgca 60
agggtgctcgt gaacattgag cagcagtcct ctgatattgc tcagggtgtg catggccact 120
tcaccaagcg ccccgaggag attggagctg gtgaccaggg acacatgttc gggatatgca 180
ccgatgagac ccctgagttg atgcccctca gccatgtcct tgccaccaag ctaggtgctc 240
gtctcaccga ggtccgcaag aacggaactg cccctggctc agcctgatgg gaagaccagt 300
gacagtcgag 310

<210> 148

<211> 292

<212> nucleic acid

<213> Zea mays

<400> 148

ccaggctctcc tacgccatcg gcgtgcccga gcccctttcg gtgttcgtgg acacgtacgg 60
caccggcgcg atccccgaca aggagatcct gaagatcgtg aaggagaact tcgacttcag 120
gcccgcatg atcatcatca acctcgacct caagaaaggc ggcaacgggc gctacctcaa 180
gacggcgggc tacgggcact ttgggagggg cgaccccgac ttcacctggg aggtggtgaa 240
gcccctcaag gcggagaagc cgtctttctgc atgaggcgcc tcctctgttt ng 292

<210> 149

<211> 279
 <212> nucleic acid
 <213> Zea mays

<400> 149

aggtgacagt cgagtaccgc aatgaggggtg gtgccatggt ccccatgcgt gtccacaccg 60
 tcctcatact ccaccagca cgacgagaca gtgaccaatg atgagatcgc tgctgacctg 120
 aaggagcatg tcatcaagcc tgtcatcctg agcagtacct tgacgagaag accatcttcc 180
 accttaacnc atctggccgc tttgtcattg gtggacctca cggcgatgct ggccctcactg 240
 gccgcaagat catcattgac acctacgggtg gctggggag 279

<210> 150
 <211> 322
 <212> nucleic acid
 <213> Zea mays

<400> 150

ctccctcttg ccggtccga ataaagagca gcagcgcaag aggtcggtag agcgagaaga 60
 aggcaatggc ggccgagagc ntccttttca cctcggagtc cgtgaacgag gggcacccccg 120
 acaagctgtg cgaccaggtg tcggacgccg tgcttgacgc atgcctcgcg caggacccccg 180
 acagcaaggt ggccctgcgag acctgcacca agaccaacat ggtgatggtg ttcggcgaga 240
 tcacgaccaa ggcgaccgtg gacnacgaga agatcgtgcg cgacacctgc cgcgagatcg 300
 ggttcactcc gacgacgtgg gc 322

<210> 151
 <211> 283
 <212> nucleic acid
 <213> Zea mays

<400> 151

gaataaagag cagcagcgca agaggtcgggt agagcgagaa gaaggcaatg gcggccgaga 60
 gcttcctttt cacctcggag tccgtgaacg aggggcaccc cgacaagctg tgcgaccagg 120
 tgtcggacgc cgtgcttgac gcatgcctcg cgcaggaccc cgacagcaag gtggcctgcg 180
 agacctgcac caagaccaac atggtgatgg tggtcggcga gatcacgacc aaggcgaccg 240
 tggactacga gaagatcgtg cgcgacacct gccgcgagat cgg 283

<210> 152
 <211> 316
 <212> nucleic acid
 <213> Zea mays

<400> 152

cgtttgcttc ttctccctct tgcgggtccc gaataaagag cagcagcgca agaggtcggt 60
 agagcgagaa gaaggcaatg gcggccgaga gcttcctttt cacctcggag tccgtgaacg 120
 aggggcaccc cgacaagctg tgcgaccagg tgtcggacgc cgtgcttgac gcatgcctcg 180
 cgcaggaccc cgacagcaag gtggcctgcg agacctgcac caagaccaac atggtgatgg 240
 tgttcggcga gatcacgacc aaggcgaccg tggactacga gaagatcgtg cgcgacacct 300
 gccgcgagat cggggt 316

<210> 153
 <211> 277
 <212> nucleic acid
 <213> Zea mays

<400> 153

gcatggccac ttcaccaagc gccccgagga gattngagct ggtgaccagg gacacatggt 60
 ccgggtatgc gaccgatgag acccctgagt tgatgccct cagccatgtc cttgccacca 120
 agctaggtgc tcgtctcacc gaggtccgca agaacggaac ntgcccctgg ctcagggtcg 180
 atgggaagac ccaggtgaca gtcgagtacc gcaatgaggg tggtgccatg gtcccatcc 240
 gtgtccacac cgtcctcatc tccaccacgc acgacga 277

<210> 154
 <211> 272
 <212> nucleic acid
 <213> Zea mays

<400> 154

tgtcatcaag cctgtcatcc ctgagcagta ccttgaagag aagaccatct tccaccttaa 60
 cccatctggc cgctttgtca ttggtggacc tcacggcgat gctggcctca ctggccgcaa 120
 gatcatcatt gacacctacg gtggctgggg agcccatggg ggtggcgctt tctccggcaa 180
 ggaccaaac aaggttgacc gcagcggacc tatgtcgcaa ggcaggctgc caagagcatc 240

gtcgccagcg gccttgctcg ccgcgccatc gt 272

<210> 155
 <211> 297
 <212> nucleic acid
 <213> Zea mays

<400> 155

ccctcttgcc ggtcccgaat aaagagcagc agcgcaagag gtcggtagag cgagaagaag 60
 gcaatggcgg ccgagagctt ccttttcacc tcggagtccg tgaacgaggg gcaccccgac 120
 aagctgtgcg accaggtgtc ggacnccgtg cttgacgcat gcctcgcgca ggaccccgac 180
 agcaaggtgg cctgcgagac ctgcaccaag accaacadatgg tgatgggtgtt cggcgagatc 240
 acgaccaagg cgaccgtgga ctacgagaag atcgtgcgcg acacctgccg cgagatc 297

<210> 156
 <211> 267
 <212> nucleic acid
 <213> Zea mays

<400> 156

gtcggtagag cgagaagaag gcaatggcgg ccgagagctt ccttttcacn tcggagtccg 60
 tgaacgaggg gcaccccgac aagctgtgcg accaggtgtc ggacgccgtg cttgacgcat 120
 gcctcgcgca ggaccccgac agcaaggtgg cctgcgagac ctgcaccaag accaacadatgg 180
 tgatgggtgtt cggcgagatc acgaccaagg cgaccgtgga ctacgagaag atcgtgcgcg 240
 acacctgccg cgagatcggg ttacact 267

<210> 157
 <211> 261
 <212> nucleic acid
 <213> Zea mays

<400> 157

aggagattgg agctggtgac caggggcaca tgtttgggta tgcgactgac gagaccctg 60
 agctgatgcc cctcagccat gtccttgcca ccaagcttgg tgctcgtctc acggaggttc 120
 gcaagaatgg aacctgcccc tggctcaggc ccgatgggaa gaccaggtg acagtggagt 180
 accgcaacga ggggtggcgcc atgggttccca tccgtgtgca cacagtctc atctctaccc 240

agcacgacga gacagtcacc a 261

<210> 158
 <211> 288
 <212> nucleic acid
 <213> Zea mays

<400> 158

gccccctcagc catgtccttg ccaccaagct aggtgctcgt ctcaccgagg tccgcaagaa 60
 cggaacctgc ccctggctca ggcctgatgg gaagaccag gtgacagtcg agtaccgcaa 120
 tgagggtggg gccatgggtcc ccatccgtgt ccacaccgtc ctcatctcca cccagcacga 180
 cgagacagtg accaatgatg agatcgctgc tgacctgaag gagcatgtca tcaagcctgt 240
 catccctgag cagtacttga cgagaagaca ttttccactt aaacccat 288

<210> 159
 <211> 311
 <212> nucleic acid
 <213> Zea mays

<400> 159

cttctccctc ttgccgggtcc cgaataaaga gcagcagcgc aagaggtcgg tagagcgaga 60
 agaaggcaat ggcggccgag agcttctttt tcacntcgga gtccgtgaac gaggggcacc 120
 ccgacaagct gtgcgaccag gtgtcggacg ccgtgcttga cgcattgcctc gcgcaggacc 180
 ccgacagcaa ggtggcntgc gagacntgca ccaagaccaa cntgggtgatg gtgttcggcg 240
 agatcacgac caaggcgacc gtggactacg agaagatcgt gcgcgacacc tgccgcgaga 300
 tcgggttcac t 311

<210> 160
 <211> 267
 <212> nucleic acid
 <213> Zea mays

<400> 160

cggacgctgg ngcgggtggcg ctttctccgg caaggacccc accaagggtgg accgcagcgg 60
 cgctaacgt ggccaggcag gccgccaaga gcatcgtggc cagcggcctc gcccgccgct 120
 gcctcgtgca ggtgtcgtac gccatcgggt gccggagccc ctgtccgtgt tcgtcaactc 180

gtacggcacc ggcacgatcc ccgacaagga gatcctcaag atcgtgaagg agaacttoga 240
 cttcaggccc gggatgatca gcatcaa 267

<210> 161
 <211> 284
 <212> nucleic acid
 <213> Zea mays

<400> 161

agctgtcgac acattcctct tcacctcgga gtctgtgaac gagggacacc ctgacaagct 60
 ctgtgaccag gtctcagatg ccgttcttga cgcttgccct gctgaggacc ctgacagcaa 120
 ggttgcttgt gagacctgca ccaagaccaa cattcancat ggtcttttgt gagatcacca 180
 ccaaggccaa tgttgactac gagaagattg tcaggagagac ctgccgcaac attgggttttg 240
 tgtcaaacga tgttgggttg acgccgacca ctgcaagggtg ctcg 284

<210> 162
 <211> 237
 <212> nucleic acid
 <213> Zea mays

<400> 162

ccatcttcca cctcaaccgg tccgggcgct tcgtcatcgg cgggccccac ggtgacgcg 60
 gcctcaccgg ccgcaagatc atcatcgaca cgtacggcgg ctggggagacc cacggcggtg 120
 gcgccttctc cggcaaggac cccaccaagg tggaccgcag cggcgccctac gtggccaggc 180
 aggcgcgcaa gagcatcgtg gccagcggcc tcgccgcgct ctgcctcttg naggttt 237

<210> 163
 <211> 236
 <212> nucleic acid
 <213> Zea mays

<400> 163

acctgcgcct ggctgaggcc cgacggcaag acccaggtga cggtgaggta cgtgaacgag 60
 ggcggcgcca tgggtcccgt ccgcgtgcac accgtgctca tctccacca gcacgacgag 120
 accgtcacca acgacgagat cgccgccgac ctcaaggagc acgtcatcaa gcccgatgc 180
 cctgagaagt acctcgacga gaagaccatc ttccacctca acccgtcggg gcgctt 236

CCAGGCTTGTGAGACCTGCA CCAAGACCAA CATTCAACAT GGTCTTTTGT GAGATCACCA

<210> 164
 <211> 272
 <212> nucleic acid
 <213> Zea mays

<400> 164

gggtggacctc acggcgatgc tggcctcaact ggccgcaaga tcattcattga cacctacggt 60
 ggctggggag cccatgggtg tggcgctttc tccggcaagg acccaaccaa ggttgaccgc 120
 agcggagcct atgtcgcaag gcaggctgcc aagagcatcg tcgccagcgg ccttgctcgc 180
 cgcgccatcg tccagggtgc ttacgccatc ggntggcccg agcctctctc cgtgttcgtc 240
 gacacgtacg gcaccggcgc gatccccgac aa 272

<210> 165
 <211> 258
 <212> nucleic acid
 <213> Zea mays

<400> 165

ccaagctagg tgctcgtctc accgaggncc gcaagaacgg aacctgcccc tggctcaggc 60
 ctgatgggaa gaccaggtg acagtcgagt accgcaatga ggggtggtgcc atggtcccca 120
 tccgtgtcca caccgtcctc atctccaccc agcacgacga gacagtgacc aatgatgaga 180
 tcgtctgtga cctgaaggag catgtcatca agcctgtcat cctgagcag taccttgacg 240
 agaagacat cttccacc 258

<210> 166
 <211> 298
 <212> nucleic acid
 <213> Zea mays

<400> 166

tctccctctt gccgggtccc aataaagagc agcagcgcaa gaggtcggta gagcgagaag 60
 aaggcaatgg cggccgagag cttccttttc acctcgaggt ccgtgaacga ggggcacccc 120
 gacaagctgt ggcaccaggt gtcggacgcc gtgcttgacg catgcntcgc gcaggacccc 180
 gacagcaagg tggcctgcga gacctgcacc aagaccaaca tggatgatgt gttcggcgag 240
 atcacgacca aggcgaccgt ggactacgag aagatcgtgc gcgacacctg ccgcgaga 298

<210> 167
 <211> 298
 <212> nucleic acid
 <213> Zea mays

 <400> 167

 cttctccctc ttgccggtcc cgaataaaga gcagcagcgc aagaggtcgg tagagcgaga 60
 agaaggcaat ggcgcccgag agcttccctt tcacctcgga gtccgtgaac gaggggcacc 120
 ccgacaagct gtgcgaccag gtgtcggacg ccgtgcttga cgcctgcctc gcgcaggacc 180
 ccgacagcaa ggtggcctgc gagacctgca ccaagaccaa catggtgatg gtgttcggcg 240
 agatcacgac caaggcgacc gtggactacg agaagatcnt gcgcgacacc tgccgcga 298

<210> 168
 <211> 265
 <212> nucleic acid
 <213> Zea mays

 <400> 168

 ccgaggtcgg caagaacgga acctgcccct ggctcaggcc tgatgggaag acccagggtga 60
 cagtcgagta ccgcaatgag ggtgggtgcca tggctcccat ccgtgtccac accgtcctca 120
 tctccaccca gcacgacgag acagtgaacca atgatgagat cgctgctgac ctgaaggagc 180
 atgtcatcaa gcctgtcatc cctgagcagt accttgacga gaagaccatc ttccacctta 240
 acccatctgg ccgtttgtca ttggt 265

<210> 169
 <211> 251
 <212> nucleic acid
 <213> Zea mays

 <400> 169

 cccgacaagc tgtgcgacca ggtgtcggac gccgtgcttg acgcatgcct cgcgcaggac 60
 cccgacagca aggtggcctg cgagacctgc accaagacca acatggtgat ggtgttcggc 120
 gagatcacga ccaaggcgac cgtggactac gagaagatcg tgccgcgacac ctgccgcgag 180
 atcgggttca cctccgacga cgtgggcctc gacgccgacc gctgcaagga ngctggtgaa 240
 catcgagcag c 251

<210> 170
 <211> 305
 <212> nucleic acid
 <213> Zea mays

<400> 170

ctcttgccgg tcccgaataa agagcagcag cgcaagaggt cggtagagcg agaagaaggc 60
 aatggcggcc gagancttcc ttttnanctc ggaatncgtg aacgaggggc ancccgacaa 120
 gctgtgcgac caggtgtcgg acgccgtgct tgacgnatgc ctgcgcgagg accccgacag 180
 caaggtggcc tgcgagacct gcaccaagac caacatggtg atggtgttcg gcgagatcac 240
 gaccaaggcg accgtggact acgagaagat cgtgcgcnac acctgccgcg agatcggggt 300
 cactc 305

<210> 171
 <211> 267
 <212> nucleic acid
 <213> Zea mays

<400> 171

cntacggtgg ctggggagcc cacggcgggg gcgccttctc cggcaaggac ccgaccaagg 60
 tggaccgcag cggggcctac gtncgnggc aggtgccaa gagcatcgtc gccgccggcc 120
 tcgcccgcg tgccatcgtc caggtotcct acnccatcgg cgtgcccgan cccctgtcgg 180
 tgttcgtgga cacgtacggc accggcgcga tccccgacaa ggagatcctg aagatcgtga 240
 aggagaactt cgacttcagg cccggca 267

<210> 172
 <211> 250
 <212> nucleic acid
 <213> Zea mays

<400> 172

ccaatgatga gatcgtgct gacctgaagg agcatgtcat caagcctgtc atccctgagc 60
 agtaccttga cgagaagacc atcttccacc ttaaccatc tggccgcttt gtcattggtg 120
 gacctcacgg cgatgctggc ctactggcc gcaagatcat cattgacacc tacggtggct 180
 ggggagccca tgggtggtggc gctttctccg gcaaggaccc aaccaagggtt gaccgcagcg 240

ganctatgtc 250

<210> 173
 <211> 304
 <212> nucleic acid
 <213> Zea mays

<400> 173

ctcctccctc ctgccgggtc cttaataaag agcagcagcg caagangttg gtagancgag 60
 cgagaagaag gcaatggcgg cgagagcctt cctgttcacc tcggagtccg tgaacgaggg 120
 gcacccagac aagctgtgcg accaggtgtc ggacgcgggtg ctggacgcct gcctggcgca 180
 ggaccccgac agcaaggtgg cctgcgagac ctgcaccaag acgaacatgg tgatggtggt 240
 cggcgagatc accaccaagg cgagcgtgga ctacgagaag atcgtgcgcg acacctgccg 300
 cgag 304

<210> 174
 <211> 328
 <212> nucleic acid
 <213> Zea mays

<400> 174

catccgtttg cctctttctc ctcttgccgg tcccgaataa agagcagcag cgcaagaggt 60
 cggtagagcg agaagaaggc aatggcggcc gagagcttcc ttttcacctc ggagtccgtg 120
 aacgangggc accccgacaa gctgtgcgaa ccaggtgtcg gacgccgtgc ttgacgcatg 180
 cctcgcgagc gaccccgaca gcaangtggc ctgcgagacc tgcaccaaga ccaacatggt 240
 gatggtgttc ggcgagatca cgaccaaggc gaccgtggac tacgagaaga tcgtgcgcga 300
 cacctgccgc gagatcgggt tcaactccg 328

<210> 175
 <211> 297
 <212> nucleic acid
 <213> Zea mays

<400> 175

tctccctctt gccgggtccc aataaagagc agcagcgcaa gaggtcggta gagcgagaag 60
 aaggcaatgg cggccgagag cttccttttc acctcggagt ccgtgaacga ggggcacccc 120

gaacaagctg tgcgaccagg tgtcggacgc cgtgcttgac gcatgcctcg cgcaggaccc 180
cgacagcaag gtggcctgcg agacctgcac caagaccaac atggtgatgg tgttcggcga 240
gatcacgacc aaggcgaccg tggactacga gaagatcgtg cgcgacacct gccgcga 297

<210> 176
<211> 275
<212> nucleic acid
<213> Zea mays

<400> 176

agatgccgtt cttgacgctt gccttgctga ggaccctgac agcaagggtt cttgtgagac 60
ctgcaccaag accaacaagg tcatgggtctt tggtagatc accaccaagg ccaatgttga 120
ctacgagaag attgtcaggg agacctgccg caacattggt tttgtgtcaa acgatgttgg 180
gcttgacgcc gaccactgca aggtgctcgt gaacattgag cagcagtccc ctgatatgct 240
caggggtgtgc atggccattc accaagcgcc ccgag 275

<210> 177
<211> 534
<212> nucleic acid
<213> Zea mays

<400> 177

gaggnagctt tnannggggn ttaagggnat ttttaaacc tnnittgnat tcccgggtcg 60
accacgcgt ccgcttgccg gtcccgaata aagagcagcn ncgcaagagg tcggtagagc 120
gagaagaagg caatggcggc cgagagcttc cttttcacct cggagtccgt gaacgagggg 180
caccccgaca agctgtgcga ccaggtgtcg gacgccgtgc ttgacgcatg cctcgcgag 240
gaccccgaca gcaaggtggc ctgagagacc tgcaccaaga ccaacatggt gatggtgttc 300
ggcgagatca cgaccaaggc gaccgtggac tacgagaaga tcgtgcgcga caccttnccg 360
cgagatcggg ttcacctttc gacgacntgg gccttgacgc ccacccgggt caaggtgctt 420
gtgnacattg agcaagaatt ccccgaaatt gngcaaggcg ttcaccggca ctttacgaac 480
cgggccnagg aagatcggnc cggccnacca nggncaattt tttgggtccc cccc 534

<210> 178
<211> 248
<212> nucleic acid

<213> Zea mays

<400> 178

gatgccccctc agccatgtcc ttgccaccaa gcttggtgct cgtctcacgg aggttcgcaa 60
gaatggaacc tgccctggc tcaggcccgga tgggaagacc caggtgacag tggagtaccg 120
caacgaggggt ggcgccatgg ttcccatcgg tgtgcacaca gtcctcatct ctaccagca 180
cgacgagaca gtcaccaacg acgagattgc tgcctgacctg aaggagcacg tcataagcc 240
agtcattcc 248

<210> 179

<211> 302

<212> nucleic acid

<213> Zea mays

<400> 179

ctcctccctc ctgccggggtc cttaataaag agcagcagcg caagagggttg gtagagcgag 60
cgagaagaag gcaatggcgg cgagagagct cctgttcacc tcggagtccg tgaacgaggg 120
gnaccagac aagctgtgcg accaggtgtc ggacgcggtg ctggacgcct gcctggcgca 180
ggaccccgac agcaagggtgg cctgcgagac ctgcaccaag acgaacatgg tgatggtgtt 240
cggcgagatc accaccaagg cgagcgtgga ctacgagaag atcgtgcgcg acacctgccg 300
cg 302

<210> 180

<211> 281

<212> nucleic acid

<213> Zea mays

<400> 180

angtctcta cgccatcggc gtggcccgan cccctgtcgg tgttcgtgga cacgtacggc 60
accggcgcgga tccccgacaa ggagatcctg aagatcgtga aggagaactt cgacttcagg 120
ccgggcatga tcattcatcaa cctcgacctc aagaaaggcg gcaacggggcg ctacctcaag 180
acgggggcct acgggcactt tgggaggggac gaccccgact tcacctggga aggtggtgaa 240
gcccccaag gcggagaagc cgtctttctgc atgaggcgcn t 281

<210> 181

<211> 269
 <212> nucleic acid
 <213> Zea mays

<400> 181

gacacattcc tttcacctc ggagtctgtg aacgagggac accctgnana agctctgtga 60
 ccagggtctca gatgccgttc ttgacgcttg ccttgctgag gaccctgaca gcaagggttc 120
 ttgtgagacc tgcaccaaga ccaacatggt catgggtcttt ggtgagatca ccaccaaggc 180
 caatgttgac gccgagaaga ttgtcagga gacctgccgc aacattgggt ttgtgtcaaa 240
 cgatgttggg cttgacgcng accatgcaa 269

<210> 182
 <211> 286
 <212> nucleic acid
 <213> Zea mays

<400> 182

ccctcttgcc ggtcccgaat aaagagcagc agcgcaagag gtcggtagag cgagaagaag 60
 gcaatggcgg ccgagagctt ctttttcacc tcggaanccg tgaacgaggg gcaccccgac 120
 aagctgtgcg accagggtgtc ggacgccgtg cttgacgcat gcctcgcgca ggaccccgac 180
 agcaagggtgg cctgcgagac ctgcaccaag accaacatgg tgatgggtgtt cggcgagatc 240
 acgaccaagg cgaccgtgga ctacgagaag atcgtgcgcg acacct 286

<210> 183
 <211> 240
 <212> nucleic acid
 <213> Zea mays

<400> 183

gcgcgacacc tgccgcgaga tcgggttcac ctccgacgac gtgggcctcg acgccgaccg 60
 ctgcaagggtg ctggtgaaca tcgagcagca gtcccccgac atcgcgcagg gcgtgcacgg 120
 gcaattcacg aagcggcccg aggagatcgg cgcgggcgac cagggccaca tgttcgggta 180
 cgncaccgac gagacccccg agctgatgcc gctgagccac gtggtggcca ccaagctggg 240

<210> 184
 <211> 250
 <212> nucleic acid

<213> Zea mays

<400> 184

cctgagcagt accttgacga gaagaccatc ttccacctta acccatctgg ccgctttgtc 60
attggtggac ctacggcgga tgctggcctc actggccgca agatcatcat tgacacctac 120
ngtggctggg gagcccatgg tggtagcgct ttctccggca aggacccaac caaggttgac 180
cgcagcggag cctatgtcgc aaggcaggct gccaaagagca tcgtcgccag cggccttgct 240
cgccgcgcca 250

<210> 185

<211> 305

<212> nucleic acid

<213> Zea mays

<400> 185

gcctcttctc ctccctcctg ccgggtcctt aataaagagc agcagcgcaa gaggttggtgta 60
gagcgagcga gaagaaggca atggcgggcg agagcttcct gttcacctcg gagtccgtga 120
acgaggggca ccagacaag ctgtgcgacc aggtgtcgga cgcggtgctg gacgcctgcc 180
tggcgcagga ccccgacagc aagggtggcct gcgagacctg caccaagacg aacatgggtga 240
tggtgttcgg cgagatcacc accaaggcga gcgtggacta cgagaagatc gtgcgcgaca 300
cctgc 305

<210> 186

<211> 305

<212> nucleic acid

<213> Zea mays

<400> 186

cgacagcaga ggnngcnngc gagacctgca ccaagaccaa catggtgatg ttgttcggcg 60
agatcacgac caaggcganc gtggactacg agaagatcgt gcgcgacacc tgatcgcgag 120
atcgggttca cctcccgcag acgtgggcct cgacgccgac cgctgcnagg ngctggtgaa 180
natcgagcan cagtcncccg acatcgcgca ngcntgcacg ggcacttcac naagcgnccc 240
gangagatcg ncgcgggcta ccatnggcac atgttcgggt acncnaccna nnagacnnnc 300
gagct 305

<210> 187
 <211> 274
 <212> nucleic acid
 <213> Zea mays

<400> 187

ccttgccacc aagcttgggtg ctctgtctcac ggagggttcgc aagantggaa cctgcccctg 60
 gctcaggccc gntgggaaga ccaggtgac agtggagtag cgcaacgagg gtggcgccat 120
 gggtcccatc cgtgtgcaca cagtctcat ctctaccag cacgacgaga cagtcancaa 180
 cgacgagatt gctgctgacc tgaaggagca cgtcatcaag ccagtcattc ccgagnagnn 240
 acctcgacga gaagacaatc ttccacacac ttna 274

Sequence 1

<210> 188
 <211> 232
 <212> nucleic acid
 <213> Zea mays

<400> 188

agcacgtcat caagccagtc atccccgagc agtacctcga cgagaagaca atcttccacc 60
 tcaaccgctc tggccgcttc gtcacggcg gacctcacgg cgacgctggc ctactggcc 120
 ggaagatcat catcgacacc tacggtgggt ggggagccca cggcgggggc gccttctccg 180
 gcaaggaccc gaccaagggtg gaccgcagcg gggcctacgt cgcgaggcag gc 232

<210> 189
 <211> 243
 <212> nucleic acid
 <213> Zea mays

<400> 189

gccccacgc catgtccttg ccaccaagct tgggtgctcgt ctacacagagg ttgcgaagaa 60
 tggaacctgc cctgggtca ggcccgatgg gaagaccag gtgacagtgg agtaccgcaa 120
 cgagggtggc gccatgggtc ccatccgtgt gcacacagtc ctcatctcta ccagcacga 180
 cgagacagtc accaagcag agattgctgc tgacctgaag gagcacgtca tcaagccagt 240
 cat 243

<210> 190

<211> 290
 <212> nucleic acid
 <213> Zea mays

 <400> 190

 ccctcttgcc ggtcccgaat aaagancagc agcgcaagag gtcggtagag cnagaagaan 60
 gcaatggcgg ccgagagcct ccttttcacc tcggagtccg tgaacgaggg gcaccccgac 120
 aagctgtgcg accaggtgtc ggacgccgtg cttgaogcat gcctcgcgca ggaccccgac 180
 ancaggtgg cctgcgagac ctgcaccaag accaacaatgg tgatgggtgtt cggcnagatc 240
 acgaccaagg cgaccgtgga ctacnagaag atcgtgcgcg acacctgccg 290

<210> 191
 <211> 266
 <212> nucleic acid
 <213> Zea mays

 <400> 191

 gncacattcc nottcaacct ggngtctgtg ancgaggag accctgacna gctctgtgac 60
 caggtctcag atgccgttct tgacgcttgc cttgctgagg anccctgacag caagggttgc 120
 tgtgagacct gcaccaagac caacatggtc atgggtctttg gtgagatcac caccaaggcc 180
 aatgttgact acgagangat tgtcagggag acctgccgca acattgggttt tgtgtcaaac 240
 gatgttgggc tgacgccgac cactgc 266

<210> 192
 <211> 276
 <212> nucleic acid
 <213> Zea mays

 <400> 192

 gtgccatggt ccccatccgt gtccacaccg tctcatctc caccagcac gacgagacag 60
 tgaccaatga tgagatcgct gctganctga aggagcatgt catcaagcct gtcacccctg 120
 agcagtaact tgacgagaag accatcttcc acttaacca tctgcccgct ttgtcattgg 180
 tggacctcac ggcgatgctg gctcactgg ccgcaagatc atcattgaca ctacggtggc 240
 tggggagccn atgntgtggc gtttncnggg aaggcc 276

<210> 193

<211> 292
 <212> nucleic acid
 <213> Zea mays

 <400> 193

 anggtggctg gggagcccat ggtggtggcg ctttctccgg caaggacca accaaggttg 60
 acngcagcgg agcctatgtn cgcaaggcag gctgccaaga gcatcgctgc cagcggcctt 120
 gctcgccgcg ccatcgcca ggtgtcttac gccatcggcg tgcccagagcc tctctccgtg 180
 ttcgctgaca cgtacggcac cggcgcgata cccgacaagg agatcctcaa gattgtcaag 240
 gagaattcga tttcaggcct ggcatgatct catcaacctt gactcaagaa gg 292

<210> 194
 <211> 226
 <212> nucleic acid
 <213> Zea mays

 <400> 194

 ctacgagaag atcgctgcgc acacctgccg cgagatcggg ttcacctccg acgacgtggg 60
 cctcgacgcc gaccgctgca aggtgctggt gaacatcgag cagcagtccc ccgacatcgc 120
 gcagggcgtg cacgggcaact tcacgaagcg gcccgaggag atcggcgcgg gcgaccaggg 180
 ccacatgttc gggtacgcca ccgacgagac ncccagactg atgcng 226

<210> 195
 <211> 289
 <212> nucleic acid
 <213> Zea mays

 <400> 195

 cttcnccctc ttgccggtcc cgaataaaga gcagcagcgc aagaggncgg tagagcgaga 60
 agaaggcaat ggcggccgag agcttccttt tcacctcgga gtccgtgaac gaggggcacc 120
 ccgacaagct gtgcgaccag gtgtcggacg ccgtgcttga cgcatgcctc gngcaggacc 180
 ccgacagcaa ggtggcctgc gagacctgca ccaagaccaa catggtgatt gtgttcggcg 240
 agatcacgac canggcgacc gtggactacg agaagatcgt gcgcnacac 289

<210> 196
 <211> 300
 <212> nucleic acid

<213> Zea mays

<400> 196

cgctctttct cctccctcct gccgggtcct taataaagag cagcagcgca agnggttggt 60
agagcgagcg agaagaaggc aatggcggcg gagagcttcc tgttcacctc ggagtccgtg 120
aacgaggggc acccagacaa gctgtgcgac caggtgtcgg acgcggtgct ggacgcctgc 180
ctggcgagcg accccgacag caaggtggcc tgcgagacct gcaccaagac gaacatggtg 240
atggtgttcg gcgagatcac caccaaggcg agcgtggact acgagaagat cgtgcgcgac 300

<210> 197

<211> 284

<212> nucleic acid

<213> Zea mays

<400> 197

ccctcttgnc ggtcccgaat aaagagcagc agcgcaagag gtcgntagag cgagaagaag 60
gcaatggcgg ccgagagctt ctttttcacc tcggagtccg tgaacgaggg gcaccccgac 120
aagctgtgcg accaggtgtc ggacgcgctn cttgangcat gcctcgcgca ggaccccgac 180
agcaaggtgg cctgcgagac ctgnaccaag acnaacatgg tgatggtggt cggcgagatc 240
acgaccaagg cgaccgtgga ctacgagaag atcgtgcgcg acac 284

<210> 198

<211> 282

<212> nucleic acid

<213> Zea mays

<400> 198

gtcccgaata aagagcagca gcgcaagang tcggtagagc ganaanaang caatggcggc 60
naagagcttc cttttcacct cggagtccgt gaacgagggg cancccgaac aagctgtncg 120
accaggtgtc ggacgcgctg cttgacgcat gcctcgcgca ggaccccgac agcaaggtgg 180
cctgcgagac ctgcaccaag accaacaatng tgatggtggt cggcgagatc acgaccaang 240
cgaccgtgga ctacgagaag atcgtgcgcg acacctgccg cg 282

<210> 199

<211> 292

<212> nucleic acid

<213> Zea mays

<400> 199

acgccatcgg ntgccgganc ccctgtccgt gttcgtcaac tcgtacggca ccggcacgat 60
ccccgacaag gagatcctca agatcgtgaa ggagaacttc gacttcaggc ccgggatgat 120
cagcatcaac ctgcacctga agaagggcgg caacagggttc atcaagaccg ncgcctacgg 180
ccacttcggc cgtgacgacg ccgacttcac ctgggagggtg gtgaagcccc tcaagttcga 240
caaggcatcg gcttaagggtt gggantgtca tgtggacatg angatacntc ct 292

<210> 200

<211> 291

<212> nucleic acid

<213> Zea mays

<400> 200

cgtttgcttc ttctccctct tgccgggtccc gaataaagag cagcagcgca agaggtcggt 60
agagcgagaa gaaggcaatg gcggccgaga gcttcctttt cacctcggag tccgtgaacg 120
angggcacc cgcacaagctg tgcgaccagg tgtcggacgc cgtgcttgac gcatgcctcg 180
cgcaggaccc cgcacagcaag gtggcctgcg agacctgcac caagaccaac atggtgatgg 240
tgttcggcga gatcacgacc aaggcgaccg tggactacga gaagatcgtg g 291

<210> 201

<211> 337

<212> nucleic acid

<213> Zea mays

<400> 201

gtnttacgcn atcngcaggc ccnagnntct ctncgtgttc gtcgacacgt anggcancgg 60
cgngatnncn ganaaggaga tcctcaagat tgtnaaggng aactnngatt tcaggcctgg 120
catgatcatc atcaaccttg acctcaagan aggcggnaac gggcgctacc tcaagacggc 180
ggattanggc cactttggaa gggangaccc tgacttcacc tgggatgtgg tnaagccact 240
caantcggag aaacctnctg cctaaggcgg nttntttttc agtaagaagc ttttggtggt 300
ctgctgtgct taatcatgcn ttatatggct tctacac 337

<210> 202

<211> 279
 <212> nucleic acid
 <213> Zea mays

 <400> 202

 cttctccctc ttgccggtcc cgaataaaga gcagcagcgc aagaggtcgg tagagcgaga 60
 agaaggcaat ggcggccgag agcttccttt tcacctcgga gtccgtgaac gaggggcacc 120
 ccgacaagct gtgcgaccag gtgtcggaag ccgtgcttga cgcattgcctc gcgcaggacc 180
 ccgacagcaa ggtggcctgc gagacctgca ccaagaccaa catggtgatg gtgttcggcg 240
 agatcacgac caaggcgacc gtggactacg agaagatcg 279

<210> 203
 <211> 443
 <212> nucleic acid
 <213> Zea mays

 <400> 203

 aaantcacgg gtcgacncac gcgtcnnnac ngactnntac taacgcgtgg gcggacgcgt 60
 ggggganggt gtggacacgg ntggggacca tggcagcacc ctcatctcgg taatcgactg 120
 tcaccctga gcagtacctt gacgagaaga ccatcttcca ccttaaccca tctggccgct 180
 ttgtcattgg tggacctcac ggcgatgctg gcctcactgg ccgcaagatc atcattgaca 240
 cctacgggtg ctggggagcc catggtggtg gcgctttctc cggcaaggac ccaaccaagg 300
 ttgaccgcag cggagcctat gtcgcaaggc angctgcnaa gagcatcgtc gccagcgggc 360
 cttgctcgnc cnggccatcg tccaaggtgt ncttaagcca atcggentgc ccganccnt 420
 ctccgntttt cgtcnaaang tta 443

<210> 204
 <211> 290
 <212> nucleic acid
 <213> Zea mays

 <400> 204

 tgccctcttct ccctcttggc ggtcccgaat aaagagcagc agcgcaagag gtcggtagag 60
 cgagaagaag gcaatggcgg ccgagagctt ccttttcacc tcggagtccg tgaacgangg 120
 gcaccccgac aagctgtgcg accaggtgtc ggacgcctg cttgacgcat gcctcgcgca 180

ggancccgac agcaaggtgg cctgcgagac ctgcaccaag accaacaatgg tgatggtggt 240
cggcgagatc acgaccaagg cgaccgtgga ctacgagaag atcgtgcgcg 290

<210> 205
<211> 304
<212> nucleic acid
<213> Zea mays
<400> 205

cgctctntcn cncncncn gccgggtcct taataaagag cagcagcgca agangttggt 60
agagcgagcg agaaagaagg catggcgggc gagagcttcc tgttcaacntc ggagtccgtg 120
aacgaggggc acccagacaa gctgtgcgac caggtgtcgg acgcggtgct ggacnccctgc 180
ctggcgagcagg accccgacag caaggtggcc tgcgagaccn gcaccaagac gaacatggtg 240
atggtgttctg gcgagatcac caccaaggcg agcgtggacn acgagaagat cgtgcgcgac 300
acct 304

<210> 206
<211> 290
<212> nucleic acid
<213> Zea mays
<400> 206

cttttctcct cctcctgcc gtttccttaa taaagagcag cagcgcaaga ggttggtaga 60
gcgagcgaga agaaggcaat ggcgggcgag agcttcctgt tcacctcgga gtccgtgaac 120
gaggggcacc cagacaagct gtgcgaccag gtgtcggacg cgggtgctgga cgctgcctg 180
gcgcaggacc ccgacagcaa ggtggcctgc gagacctgca ccaagacgaa catggtgatg 240
gtgttcggcg agatcaccac caaggcgagc gtngactacg agaagatcgt 290

<210> 207
<211> 247
<212> nucleic acid
<213> Zea mays
<400> 207

gataccacc aaggccaatg ttgactacga gaagattgtc agggagacct gccgcaacat 60
tggttttgtg tcaaacgatg ttgggcttga cgccgaccac tgcaagggtgc tcgtgaacat 120

tgagcagcag tcccctgata ttgctcaggg tgtgcatggc cacttcacca agcgccccga 180
ggagattgga gctgggtgacc agngacacat gttcgggtat gcgaccgatg agaccctgag 240
ttgatgc 247

<210> 208
<211> 291
<212> nucleic acid
<213> Zea mays

<400> 208

cgtttgcctc ttctccctct tgccgggtccc gaataaagag cagcagcgca agaggtcggt 60
agagcgagaa gaaggcaatg gcggccgaga gcttcntttt cacctcggag tccgtgaacg 120
aggggacccc cgacaagctg tgcgaccagg tgtcggacgc cgtgcttgac gcatgcctcg 180
cgcaggaccc cganagcaag gtggcctgcg agacctgcac caagaccaac atggtgatgg 240
tgttcggcga gatcacgacc aaggcgaccg tggactacga gaagatcgtg c 291

<210> 209
<211> 428
<212> nucleic acid
<213> Zea mays

<400> 209

cggacgcttg ggcttttcgcg tggggtcgac acgtacgggn ccgggggggat cncgcacaag 60
gagatcctca agattgtcaa ggagaacttt tatttcaggc ctggcatgat catcatcaac 120
cttgacctca agaaaggcgg caacggggcgc tacctcaaga cggcggncta cggccacttt 180
ggaaggggacg accctgactt cacctgggag gtggtgaagc cactcaagtc ggagaaacct 240
tctgocctaag gcggcctttt ttttcagtaa gaagcttttg gtggtctngc tgtgcttaat 300
catgttttta tatggcttct acatgtttga ggntctttct tgatctgcac cgggcttata 360
gnttgtgttg nactgcccta ataagtgggtg cttatgagga ctggttctgg ttttgctgct 420
tatgtngt 428

<210> 210
<211> 295
<212> nucleic acid
<213> Zea mays

<400> 210

ccttaatnaa gngcagcagc gcaaggtgag ccgccagctt gccccagggtt ggtagagcga 60
gcgagaagaa ggcaatggcg gcggagagct tcctgttcac ctcgaggtcc gtgaacgagg 120
ggcaccacga caagctgtgc gaccaggtgt cggacgcggt gctggacgcc tgccctggcg 180
aggaccccgga cagcaaggtg gcctgcgaga cctgcaccaa gacgaacatg gtgatggtgt 240
tcgngagat caccaccaag gcgagcgtgg actacgagan gntcgtgcnc gacac 295

<210> 211

<211> 257

<212> nucleic acid

<213> Zea mays

<400> 211

ggccacttca ncaagcgtcc cgaggagatt ggagctggtg accagggacn cgtgttgcgg 60
gtatgcgacc gatgagaccc ctgagttgnt gcccctcagc catgtccttg ccaccaagct 120
aggtgctcgt ctactgagg tccgcaagaa cggaacctgc ccctggctca ggccatgatg 180
gaagaccenn gtgacagtcg agtaccgcaa tgagggtggt gcnatggtcc cngnnngtgt 240
ccanaccgtc ctcattt 257

<210> 212

<211> 288

<212> nucleic acid

<213> Zea mays

<400> 212

ctcggatccg cccgaccacg accaccccg ctcgcccgcg cgcagaagca gcagatcaga 60
gaagatggcc ggactcgaca ccttcctctt cacctcgag tccgtgaacg agggacaccc 120
tgacaagctc tgcgaccagg tctcagatgc tgttctggac gcttgccttg ctgaggaccc 180
tgacagcaag gttgcttgcg agacctgcac caagaccaac atgggtcatgg tcttttgtga 240
gatcaccacc aaggcaatgt cgactagaga agattgtcag ggagacat 288

<210> 213

<211> 467

<212> nucleic acid

<213> Zea mays

<400> 213

ttnnnnnttcc ttnggccccn aaaggtaaaa ggactcccgg gtcgacccac gcgtcagcca 60

cgcgtccgcc cacgcgtccg cccacgcgtc cgcccacgcg tccgcccacg cgtccgcccc 120

ctcctgccgg gtccttaata aagagcagca gcgcaagggt agccgccagc ttgccccggt 180

tggtagagcg agcganaaga angcaatggc ggcgganagc ttctgttca cctcgggtcc 240

gtgaacgagg ggcacccaga caagctgtgc gaccaggtgt cggacgcggt gctggcgcc 300

gcctggcgca ggaccccgac agcaagggtg cctgcgagac ctgcaccaag acgacatggt 360

gatggtgttc ggcgagatna ccaccaaggc gagcgtggac tacgaaaaag atntgcgcga 420

aaactggccg ccaagatcgg gttcacctcc gacgacgtgg ggctcga 467

<210> 214

<211> 287

<212> nucleic acid

<213> Zea mays

<400> 214

cggacctggg cgttctccct cttgccggtc ccgaataaag agcagcagcg caagaggctg 60

gtagagcgag aagaaggcaa tggcggccga gagcttctt ttacctcgg agtccgtgaa 120

cgaggggcac cccgacaagc tgtgcgacca ggtgtcggac gccgtgcttg acgcatgcct 180

cgcgcaggac cccgacagca aggtggcctg cgagacctgc accaagacca acatggtgat 240

ggtgttcggc gagatcacga ccaaggcgat cgtggactac gagaaga 287

<210> 215

<211> 294

<212> nucleic acid

<213> Zea mays

<400> 215

ctcttctcct cctcctggnn gggtccttaa taaagagcag cagcgcaaga ngttggtaga 60

gcgancgana agaaggcaat ggcggcgag agcttctgt tcanctcgga gtccgtgaac 120

gaggggcacc cagacaagct gtgcgaccag gtgtcggacg cgggtgctgga cgctgcctg 180

gcgcaggacc ccgacagcaa ggtggcctgc gagacctgca ccaagacgaa catggtgatg 240

gtgttcggcg agatcaccac caaggcgagc gtggactacn agaagatcgt gcgc 294

<210> 216
 <211> 228
 <212> nucleic acid
 <213> Zea mays

 <400> 216

 cggaacctgc ccctggctca ggctgatgg gaagaccag gtgacagtc agtaccgaa 60
 tgagggtggg gccatgggtcc ccatccgtgt ccacaccgtc ctcatctcca ccagcacga 120
 cgagacagtg accaatgatg agatcgctgc tgacctgaag gagcatgtca tcaagcctgt 180
 catccctgag cagtaccttg acgagaagac catcttcac cttaacct 228

<210> 217
 <211> 268
 <212> nucleic acid
 <213> Zea mays

 <400> 217

 cgccccactt caccaagcgc ccantaggag attggagctn gtgaccaggg gcacatgtan 60
 gggatatgca ctgacgagac ccctgagctg atgcccctca gccatgtcct tgccaccaag 120
 ctgggtgctc gtccacggag gttcgcaaga atggaacctg cccctggctc aggcccgatg 180
 ggaagaccca ggtgacagtg gagtaccgca agaggggtggc gccatggttc ccatccgtgt 240
 gcacacagtc ctcatctcta ccagcag 268

<210> 218
 <211> 263
 <212> nucleic acid
 <213> Zea mays

 <400> 218

 cgcattgctc ggcgagcacc ccgacagcaa ggtggcntgc gagacctgca ccaagaccaa 60
 catggtnatg gtnttcggcg agatcacgac caaggctacc gtgggactac gagaagatcg 120
 tgcgctacac ctgncgagag atcnggttca cctccgacga cgtgggcctc gacgcctacc 180
 gctncaaggt gctggtgaac atctagcagc agtccccga catnncgag ggcgtgcaag 240
 ggcattcnng aagcggcccg agg 263

<210> 219

<211> 256
<212> nucleic acid
<213> Zea mays

<400> 219

gagccacg cgggggcgcc ttctccggca aggacccgac caaggtggac cgcagcgggg 60
cctacgtcgc gaggcaggct gccaaagaca tcgtcgcgcg cgccctcgcc cgccgcgcca 120
ttgtccaggt ctctacgcc atcgggtgcc cganccctt tcggtgttcg tggacacgta 180
cggcaccggc gcgatccccg acaaggagat cctgaagatc gtgaaggaga attcgacttc 240
aggcccgga tgatca 256

<210> 220
<211> 334
<212> nucleic acid
<213> Zea mays

<400> 220

anngccggag cccctgtccg tggtcgtcaa ctctacggc accggcacga tccccgacaa 60
ggagatcctc aagatcgtga aggagaactt cgacttcagg cccgggatga tcagcatcaa 120
cctcgacctg aagaagggcg gcaacagggt catcaagacc gccgcctacg gccattcggc 180
cgtgacgacg ccgacttcac ctgggaggtg gtgaagcccc tcaagttcga caaggcatcg 240
gcttaagggt nggatgtcac tgtggacatg aggactactt cctctggctc tgcgtgttacc 300
tgcaagcatt gtgctgtgga tgtgtgtgtt tgat 334

<210> 221
<211> 255
<212> nucleic acid
<213> Zea mays

<400> 221

ccccgacaag ctgtgcgacc aggtgtcggc cgccgtgctt gacgnatgcn tcncgcaggc 60
ccccnncanc nnggtggcct gcgagacctg caccaagacc aacatngtga tgggtgttcg 120
cgagatcacg ancaaggcga ccgtggacta cgagnngatc gtncgcgaca cctgccgcga 180
gatcgggttc aatccganga ngtgggcctc nacgccgnnc gctgcnaggt gctggtgaac 240
ntcgagcagc agtcc 255

Station	Time	Lat.	Long.	Depth	Temp.	Wind	Wave	Cloud	Remarks
1	0800	34° 15' N	121° 05' E	10	18.5	10	1	100	Clear
2	0900	34° 30' N	121° 15' E	10	19.0	10	1	100	Clear
3	1000	34° 45' N	121° 25' E	10	19.5	10	1	100	Clear
4	1100	35° 00' N	121° 35' E	10	20.0	10	1	100	Clear
5	1200	35° 15' N	121° 45' E	10	20.5	10	1	100	Clear
6	1300	35° 30' N	121° 55' E	10	21.0	10	1	100	Clear
7	1400	35° 45' N	122° 05' E	10	21.5	10	1	100	Clear
8	1500	36° 00' N	122° 15' E	10	22.0	10	1	100	Clear
9	1600	36° 15' N	122° 25' E	10	22.5	10	1	100	Clear
10	1700	36° 30' N	122° 35' E	10	23.0	10	1	100	Clear
11	1800	36° 45' N	122° 45' E	10	23.5	10	1	100	Clear
12	1900	37° 00' N	122° 55' E	10	24.0	10	1	100	Clear
13	2000	37° 15' N	123° 05' E	10	24.5	10	1	100	Clear
14	2100	37° 30' N	123° 15' E	10	25.0	10	1	100	Clear
15	2200	37° 45' N	123° 25' E	10	25.5	10	1	100	Clear
16	2300	38° 00' N	123° 35' E	10	26.0	10	1	100	Clear
17	0000	38° 15' N	123° 45' E	10	26.5	10	1	100	Clear
18	0100	38° 30' N	123° 55' E	10	27.0	10	1	100	Clear
19	0200	38° 45' N	124° 05' E	10	27.5	10	1	100	Clear
20	0300	39° 00' N	124° 15' E	10	28.0	10	1	100	Clear
21	0400	39° 15' N	124° 25' E	10	28.5	10	1	100	Clear
22	0500	39° 30' N	124° 35' E	10	29.0	10	1	100	Clear
23	0600	39° 45' N	124° 45' E	10	29.5	10	1	100	Clear
24	0700	40° 00' N	124° 55' E	10	30.0	10	1	100	Clear

<400> 225

<210> 226

<400> 226

<210> 227

<400> 227

<210> 228

<211> 281
 <212> nucleic acid
 <213> Zea mays

 <400> 228

 tcatcattga cacctacngt ggctggggag cccatggtgg tggcgctttc tccggcaaga 60
 naccacaacca aggttgaccg cagcggagcc tatgtcgcaa ggcaggctgc caagagcatc 120
 gtcgccagcg gccttgctcg ccgcgccatc gtccaggtgt cttacgccat cggntgcccg 180
 agcctctctc cgtgttcgtc gacacgtacg gcaccggcgc gatccccgac aaggagatct 240
 caagattgtc aaggagaatt cgatttcagg ctggcatgat c 281

<210> 229
 <211> 290
 <212> nucleic acid
 <213> Zea mays

 <400> 229

 ctccgcctcg accggatctc gtcggactcg gatccgcccg accaccccgc gccgcgcgag 60
 atccagagaa gatggcagct gtcgacacat tcctcttcac ctccgagttc gtgaacgagg 120
 gacaccctga caagctctgt gaccaggtct cagatccgtt cttgacgctt gccttgctga 180
 ggaccctgac agcaagggtt cttgtgagac ctgcaccaag accaacaatgg tcatggtctt 240
 tggtgagatc accaccaagg ccaatgttga ctacgagaag attgtcaggg 290

<210> 230
 <211> 318
 <212> nucleic acid
 <213> Zea mays

 <400> 230

 ctntctccct ctttgccggt cccgaataaa gagcagcagc gcaagaggtc ggtagagcga 60
 gaagaaggca atggcggccg agagcttcct ttacacctcg gagtccgtga aacgaggggc 120
 accccgaaca agctgtgcga ccangtgtcg gacgcgctgc tttgacgcat gnetcnegca 180
 ngagnccgac agcaangtgg cctgcgagac ctgcaccaag ancaacaatgg tgatggtggt 240
 cggcgagatc acgaccaagg cgaccgtgga ctacgagaag atcgtgcgcg acacctgccg 300
 cgagatcggg ttcaactcc 318

<210> 231
 <211> 276
 <212> nucleic acid
 <213> Zea mays

 <400> 231

 attgacacct acggtggctg gggagcccat ggtggtggcg ctttctccgg caaggaccca 60
 accaagggttg accgcagcgg agcctatgtc gcaaggcagg ctgccaaagag catcgtcgcc 120
 agcggccttg ctgcgcgcgc catcgtccag gtgtcttacg ccatcggntg cccgagcctc 180
 tctccgtggt cgtcgacacg tacggcaccg gcgcgatccc cgacaaggag atcctcaaga 240
 tgtcaaggag aattcgattt cangctggca tgatca 276

<210> 232
 <211> 244
 <212> nucleic acid
 <213> Zea mays

 <400> 232

 ctcacggcga tgotggcctc actggccgca agatcatcat tgacacctac ggtggctggg 60
 gagcccatgg tgggtggcgt ttctccggca aggaccaaac caaggttgac cgcagcggag 120
 cctatgtcgc aaggcaggct gccaaagaca tcgtcgccag cggccttgct cgccgcgcca 180
 tcgtccagggt gtcttacgcc atcgggtgcc cgagcctctc tccgtgttcg tcgacacgta 240
 cggc 244

<210> 233
 <211> 349
 <212> nucleic acid
 <213> Zea mays

 <400> 233

 atcaccacca agggccaatg ttgactacga gaagattgtc agggagacct gccgcaacat 60
 tggtttgtgt caaaacgatg ttgggcttga cgccgaccac tgcaagggtgc tcgtgaacat 120
 tgagcagcag tcccttgata ttgctcaggg tgtgcatggc cacttcacca agcgccccga 180
 ggagattgga gctggtgacc aggacacat gttcgggtat gcgaccgatg agaccctgag 240
 ttgatgccct caagccatgt cttgccacca gctagtgtc gtctcacgag gccgcaaaan 300

ggactgnccn ggnnaanctg atggagacca gtganatcga gtacncatt 349

<210>	234
<211>	228
<212>	nucleic acid
<213>	Zea mays

<400> 234

cggcgatgct ggcctcactg gccgcaagat catcattgac acctacggtg gctggggagc 60

ccatggtggt ggcgctttct ccggcaagga cccaaccaag gttgaccgca gcggagccta 120

tgtcgcaagg cagqctgcc aagcatcgt cgccagcggc cttgctcgcc gcgccatcgt 180

ccaggtgtct tacgccatcg gcgtgcccga gcctctctcc gtgttcgt 228

<210>	235
<211>	263
<212>	nucleic acid
<213>	Zea mays

<400> 235

cctgacagca aggttgcttg cgagacctgc accaagacca acatgggtcat ggtcttttgg 60

gagatcacca ccaaggccaa tgtcgactac gagaagattg tcagggagac atgccgcaac 120

atnccgttttcg tgtcgaacga tgtcgggctt gacgctgacc actgcaaggt gcttgtnaac 180

attnagcagc agtcccctga tattgctcag ggtgtgcagg ccattcacna agccccccga 240

ggagntngag tgtgaccagg qga 263

<210>	236
<211>	219
<212>	nucleic acid
<213>	Zea mays

<400> 236

gcgagaagaa ggcaatggcg gccgagagct tccttttcac ctcggagtcc gtgaacgagg 60

ggcancccgga caagctgtgc gaccaggtgt cggacgccgt gcttgacgca tgcctcgcgc 120

aggacccccga cagcaaggtg gcctgcgaga cctgcaccaa gaccaacatg gtgatggtgt 180

tcggcgagat cacgaccaag gcgaccgtgg actacgaga 219

<210> 237

<211> 301
 <212> nucleic acid
 <213> Zea mays

<400> 237

cgttcgccctc ttctcctccc tcctgccggg tccttaataa agagcagcag cgcaagaggt 60
 tggtagagcg agcgagaaga aggcaatggc ggcggagagc ttctgtttca cctcggagtc 120
 cgtgaacgag gggcaccag acaagctgtg cgaccagggtg tcggacgcgg tgctggacgc 180
 ctgcctggcg caggaccccg acagcaaggt ggcctgcgag acctgcacca agacgaacat 240
 ggtgatgggtg ttccggcgaga tnaacaacaa aggcgagcgt ggactacgag aagatgggtgc 300
 g 301

Sequence

<210> 238
 <211> 439
 <212> nucleic acid
 <213> Zea mays

<400> 238

gtcggatctg agacgagacg agttaccatc tcattcccaac tcgggaacga acaagttacc 60
 atctcatccc aactccgcct cgaccggatc tcgtcggact cggatccgcc cgaccacccc 120
 gcgccgccgc agatcaaaga agatggcagc tgcgcacaca ttctctttca cctcggagtc 180
 tgtgaacgag ggacaccctg acaagctctg tgaccagggtc tcagatgccg ttcttgacgc 240
 ttgccttgct gaggaccctg acagcaaggt tgcttgtgag acctgcacca agaccaacat 300
 gggcatggnc tttggtgaga tcaccaccaa ggccaatggt gactaccaag aagattgtca 360
 gggagnacct gccgnaacat tnggtttggg gtcaaacgat gttggcttga cgccaaccac 420
 tggaaggggc tcgtnaant 439

<210> 239
 <211> 239
 <212> nucleic acid
 <213> Zea mays

<400> 239

aggtgacagt cgagtaccgc aatgaggggtg gtgccatggt ccccatccgt gtccacaccg 60
 tcctcatctc caccagcac gacgagacag tgaccaatga tgagatcgct gctgacctga 120

aggagcatgt catcaagcct gtcacccctg agcagtacct tgacgagaag accatcttcc 180
 accttaaccc atctggccgc nttgtcattg gtggactcac ggcgatgtgg cctcactgg 239

<210> 240
 <211> 224
 <212> nucleic acid
 <213> Zea mays
 <400> 240

gtcagggaga catgccgcaa cattggtttc gtgtcgaacg atgtcgggct tgacgctgac 60
 cactgcaagg tgcttgtgaa cattgagcag cagtcccttg atattgctca ggggtgtgcac 120
 ggccacttca ccaagcgcgc cgaggagatt ggagctggtg accaggggca catgtttngg 180
 tatnncnantt acnngacacc tgagctgatg cccctcagcc atgt 224

<210> 241
 <211> 274
 <212> nucleic acid
 <213> Zea mays
 <400> 241

ctcggatccg cccgaccacg accaccccg cccgcccgcg cgcagagcag cagatcagag 60
 aagatggccg gactcgacac ctctctcttc acctcggagt ccgtgaacga gggacaccct 120
 gacaagctct gcgaccaggt ctcagatgct gttctggacg cttgccttgc tgaggaccct 180
 gacagcaagg ttgcttgcca gacctgcacc aagaccaaca tggatcatggt ctttggtgag 240
 atcaccacca aggccaatgt cgatacgaga agat 274

<210> 242
 <211> 232
 <212> nucleic acid
 <213> Zea mays
 <400> 242

ccctgacaag ctctnccgacc aggnctcana tgctgttctg gacgcttgcc ttgctgagga 60
 ccctgacagc aagggttgctt gcnagacntg caccaagacc aacatggnca nggtcttttg 120
 tgagatcacc accaaggcca angtcgacta cgaggagatt gtcagggaga catgccgcaa 180
 cattggtntc gtgtcgaacg atgtcgggct tgacgctgac cactgcaagg tg 232

<210> 243
 <211> 267
 <212> nucleic acid
 <213> Zea mays

 <400> 243

 cntctccctc ttgccggtcc cgantaaaga gcagcagcgc aagaggtcgg tagagcgaga 60
 agaaggcaat ggcggccgag agcntccttt tcacctcgga gtccgtgaac gaggggcacc 120
 ccgacaagct gtgcgaccag gtgtcggaac ccgtgcttga cgcatgcctc gcgcaggacc 180
 ccgacagcaa ggtggcctgc gagacctgca ccaagaccaa catggtgatg gtgttcggcg 240
 agatcacgac caaggcgacc gtggact 267

<210> 244
 <211> 309
 <212> nucleic acid
 <213> Zea mays

 <400> 244

 cgctctntcn cccccnccn gccgggtcct taataaagag cagcagcgca aggtgagccg 60
 ccagcttgcc ccaggttggt agagcgagcg agaagaaggc aatggcggcg gagagcttcc 120
 tgttcacatc ggagtccgtg aacgaggggc acccagacaa gctgtgacgac caggtgtcgg 180
 acgcggtgct ggacgcctgc ntggcgagcgg accccgacag caaggtggcc tgcgagaccn 240
 gcaccaagac gaacatggtg atggtgttcg gcgagatcac caccaaggcg agcgtggaca 300
 acgagaaga 309

<210> 245
 <211> 347
 <212> nucleic acid
 <213> Zea mays

 <400> 245

 cgctcgacc gggatctcgt cggactcgga tccgcccgc cccccgcgc cgccgcagat 60
 caaagaagat ggcagctgtc gacacattcc tcttcacctc ggagtctgtg aacgagggac 120
 accctgacaa gctctgtgac caggtctcag atgccgttct tgacgcttgc cttgctgagg 180
 accctgacag caaggttgct tgtgagacct gnaccaagac caacatggtc atggtctttg 240

CCACCAAGCT TGGTGCTCGT C

gtgagatcac caccaaggcc attgtgacta cgagaagatt gtccagggag acttgccgca 300
acattggttt gtgtcaaacg atgttgggnt gacgccacac tgcaaag 347

<210> 246
<211> 261
<212> nucleic acid
<213> Zea mays

<400> 246

cggacggtgg gcggangcgt gggcggacgc gtggggtttc gtgtcgaacg atgtcgggct 60
tgangctgac cactgcaagg tgcttgtgaa cattgnnnca gcagtccctt natattgctc 120
agngtgtgca cggccacttc accaagcgcc ccgaggagat tggagctggt gaccaggggc 180
acatgttttg gtatgcnact gacgagaccc ctgagctgat gcccctcagc catgtccttg 240
ccaccaagct tgggtgctcgt c 261

<210> 247
<211> 211
<212> nucleic acid
<213> Zea mays

<400> 247

gcgaccaggt gtcggacgcc gtgcttgacg catgcctcgc gcaggacccc gacagcaagg 60
tggcctgcga gacctgcacc aagaccaaca tggatgatggt gttcggcgag atcacgacca 120
aggcgaccgt ggactacgag aagatcgtgc gcgacacctg ccgcgagatc ggggtcacct 180
ccgacgacgt gggctcgacg ccgaccgctg c 211

<210> 248
<211> 301
<212> nucleic acid
<213> Zea mays

<400> 248

gccatcggcg tgccggance cctgtccgtg tncgtcgact ccnacggcac cgggaccatc 60
cccgacaagg aganncggn ganngtcaag gagaacttcg acttcaggcc agggatgatc 120
accatcaacc tcgacctcaa gaaggcggc aacaggttca tcaagaccgc cgcatacggc 180
cactttggcc gtgacgacgc cgacttcacc tgggaggngg tcaagccctt aaagaaggca 240

tccgcttaag aatgtattgg gaagttcact ggacatgagg ttcattctcg tctggctctg 300

c 301

<210> 249

<211> 320

<212> nucleic acid

<213> Zea mays

<400> 249

caccggcgcg atccccgaca aggagatcct gaagatcgtg aaggagaact tcgacttcag 60

gcccggcacg atcatcatca acctcgacct caagaaaggc ggcaacgggc gctacctcaa 120

gacggcggcc tacgggcact ttgggaggga cgaccccgac ttcacctggg aggtggtgaa 180

gccccctcaag gcggagaagc cgtcttctgc atgaggcgcc tcctctgttt tggaagaagc 240

ttttggtctg gtctggtctg gtctggtgtg cctgcgctct atcatgcttt tttatggctc 300

ctacttgtga ttcttgatct 320

<210> 250

<211> 282

<212> nucleic acid

<213> Zea mays

<400> 250

acttcacgaa gcggcccgag gagatcggcg cgggcgacca ngncncacat gttcgggtac 60

gccaccgacg agacccccga gctgatgccg ctgagccacg tgctggccan caagctgggc 120

gcgcgctcac cgagncacgc aagaacggca ctgcgcgtgg ctnaggccnc gacggcaaga 180

cccaggtgac ggtggagtac gtgaacgatg gcggcgccat ggtgcccgtc cgcgtgcaca 240

cgtgctcatc tncaccagc acgacganna ctnaacaacg ac 282

<210> 251

<211> 239

<212> nucleic acid

<213> Zea mays

<400> 251

cttccacctc aaccgctctg gccgcttcgt catcggcgga cctcacggcg acgctggcct 60

cactggccgg aagatcatan tccaggtctc ctacgccatc ggcgtgcccg aaacccctgt 120

cggtgttcgt ggacacgtac ggcaccggcg cgatccccga caaggagatc ctgaagatcg 180
tgaaggagaa cttcgacttc aggcccggca tgatcatcat caacctcgac ctcaagaaa 239

<210> 252
<211> 511
<212> nucleic acid
<213> Zea mays

<400> 252

gnnnnnnnga aaantctacc cngtcagggtg ccggtcanga gaattcacgg gncgacccag 60
cgtcaccac ggnggtggcg ctttctccgg caaggacccc accaagggtgg accgcagcgc 120
gcctacgtgg ccaggcaggc cgccaagagc atcgtggcca gcggcctcgc ccgccgcgcc 180
tcgtgcaggt gtcgtacgcc atcggcgtgc cggagccccct gtccgtgttc gtcaaccgta 240
cggcaacggc acgattcccg acaagggaga ttctcaaaga tcgttaagga gaaactcgaa 300
cttnaanggc cgggaanatt aagcaatcaa acctncgaac ctngaaaaaa gggcggcaac 360
aaggttnaat caaaaancgc ccgcctaagg ncaattnggc ccgttaacca acgcganttc 420
aactgggaag tggtnaaacc cctcaaattc cacaaagcat cggcttaaag gttggaattt 480
cactgtggac attaaggact aancttctc t 511

<210> 253
<211> 234
<212> nucleic acid
<213> Zea mays

<400> 253

cnacngtctn gaatgagcac gtcancaagc ccgtcatccc ggagaggtac ctggacgaga 60
agacnatctn ccnnnnnnnn ncgtcnnggc gcttcgtcat cggcggggccc cacggggacg 120
ccggcctcac cggccgcaag atcatcatcg acacctacgg cggctgggga gcccacggcg 180
ggggcgcctt ctccggcaag gacccaccca angtggaccg cngcgggggcc tact 234

<210> 254
<211> 295
<212> nucleic acid
<213> Zea mays

<400> 254

ctctttctcct ccctcctgnc gggtccttaa taaagagcag cagcgcaagg tgagccgcca 60
gcttgcccca gggttggtaga gcgagcgaga agaaggcaat ggcgggcgag agcttcctgt 120
tcacgtcggg gtccgtgaac gaggggcacc cagacaagct gtgcgaccag gtgtcggacg 180
cggtgctgga cgctgcctg gcgcaggacc ccgacagcaa ggtggcctgc gagacctgca 240
ccaagacgaa catgggtgatg gtgttcggcg agatcaccac caaggcgagc gtgga 295

<210> 255
<211> 257
<212> nucleic acid
<213> Zea mays
<400> 255

ccaanganga gancgcngcn gacctgaagg agcatgtcan caagcctgtc anccctgagc 60
agnacctnga cgagaagacc ancttcacc tnaaccanc nggcccgtnt gtcattgggtg 120
gaccncacgg cgatgcnggc ctcaenggcc gcaagancan catngacacc nacgggtggcn 180
ggggagccca tgggtgggtgc gcntncnccg gcaaggaccc aaccaagggt gaccgcagcg 240
gacctatgtc gcaaggc 257

<210> 256
<211> 206
<212> nucleic acid
<213> Zea mays
<400> 256

ggcgagatca cgaccaaggc gaccgtggac tacgagaaga tcgtgcgcga cacctgccgc 60
gagatcgggt tcacctccga cgacgtgggc ctcgacgccg accgctgcaa ggtgctgggtg 120
aacatcgagc agcagtcccc cgacatcgcg cagggcgtgc acgggcactt cacgaagcgg 180
cccgaggaga tcggcgcggg cgacca 206

<210> 257
<211> 208
<212> nucleic acid
<213> Zea mays
<400> 257

agacaatctt ccacctcaac ccgtctggcc gcttcgtcat cggcggaact cacggcgacg 60

ctggcctcac tggccggaag atcatcatcg acacctacgg tggctgggga gcccacggcg 120
 ggggcgcctt ctccggcaag gacccgacca aggtggaccg cagcggggcc tacgtcgcga 180
 ggcaggctgc caagagcatc gtcgccgc 208

<210> 258
 <211> 339
 <212> nucleic acid
 <213> Zea mays

<400> 258

aacgaggggtg ggcgcatggt tcccatccgt gtgcacacag tcctcatctc taccagcac 60
 gacgagacag tcaccaacga cgagattgct gctgacctga aggagcacgt catcaagcca 120
 gtcattccccg agcagtacct cgacgagaag acaatcttcc acctcaaccc gtctggccgt 180
 tcgtcatcgg cggacctcac ggcgacgcgg cctcactggc ggaagatcat catcgacacc 240
 tacggtgntt gggagccacg gcggggcgct ttncggcaag gaccgncaag tggacgancg 300
 gggctagtcn gagcagntgc aaganatgtc gcgcggctg 339

<210> 259
 <211> 195
 <212> nucleic acid
 <213> Zea mays

<400> 259

caggacccccg acagcaaggt ggctgcgag acctgcacca agaccaacat ggtgatgggtg 60
 ttcggcgaga tcacgaccaa ggcgaccgtg gactacgaga agatcgtgcg cgacacctgc 120
 cgcgagatcg ggttcacctc cgacgacgtg ggctcgacg ccgaccgctg caaggtgctg 180
 gtgaacatcg agcag 195

<210> 260
 <211> 267
 <212> nucleic acid
 <213> Zea mays

<400> 260

cgtttgccctc ttctccctct tgccgggtccc gaataaagag cagcagcgca agaggtcggt 60
 agagcgagaa gaaggcaatg gcggccgaga gcttcctttt cacctcggag tccgtgaacg 120

aggggcaccc cgacaagctg tgcgaccagg tgtcggacgc cgtgcttgac gcatgcctcg 180
 cgcaggaccc cgacagcaag gtggcctgcg agacctgcac caagaccaac atggtgatgg 240
 tgttcggcga natcacgacc aaggcga 267

<210> 261
 <211> 272
 <212> nucleic acid
 <213> Zea mays

<400> 261

atccgtttgc ctcttctccc tcttgccggt cccgaataaa gagcagcagc gcaagaggtc 60
 ggtagagcga gaagaaggca atggcggccg agagcttcct tttcacctcg gagtccgtga 120
 acgaggggca ccccgacaag ctgtgcgacc aggtgtcgga cgccgtgctt gacgcatgcc 180
 tcgcgcagga ccccgacagc aagggtggcct gcgagacctg caccaagacc aacatgggtga 240
 tnngtgttcgg cgagatcacg accaangcga cc 272

<210> 262
 <211> 335
 <212> nucleic acid
 <213> Zea mays

<400> 262

gcggactaat gtcgcaaggc aggctgccaa gagcatcgtc gccagcggcc ttgctcgccg 60
 cgccatcgtc cagggtgtctt acgccatcgg gtgcccagac ctctctccgt gttcgtcgac 120
 acgtacggca ccggcgcgat ccccgacaag gagatcctca agattgtcaa ggagaactcg 180
 atttcaggcc tggcatgata atcatcaacc ttgacctcaa gaaaggcggc aacgggcgct 240
 actcaagagn gcggctacgg ccactttgga agggacgacc tgattcacct gggaggtggt 300
 gaagccattc aatcggagaa actttgctaa gcggc 335

<210> 263
 <211> 270
 <212> nucleic acid
 <213> Zea mays

<400> 263

cacacatccg tttgcctctt ctccctcttg ccggtccoga ataaagagca gcagcgcaag 60

aggtcggtag agcgagaaga aggcaatggc ggccgagagc ttcccttttca cctcggagtc 120
 cgtgaacgag gggcaccccg acaagctgtg cgaccagggtg tcggacgccg tgcttgacgc 180
 atgcntcgcg caggaccccg acagcaagggt ggccctgcgag acctgcacca agaccaacat 240
 ggtgatggtg ttcggcgaga tcacgaccaa 270

<210> 264
 <211> 246
 <212> nucleic acid
 <213> Zea mays
 <400> 264

gatctcgtcg gactcggatc cgcccgaacca ccccgcgccg ccgcagatca aagaagatgg 60
 cagctgtcga cacattcctc ttcaacctcg agtctgtgaa cgagggacac cctgacaagc 120
 tctgtgacca ggtctcagat gccgtttcttg acgcttgccct tgctgaggac cctgacagca 180
 aggttgcttg tgagacctgc acaaagacaa acatggtcat ggtcttttggg gagatcacca 240
 ccaagg 246

<210> 265
 <211> 263
 <212> nucleic acid
 <213> Zea mays
 <400> 265

ctctttctccc tcttgccgnt cccgaataaa gagcagcagc gcaagaggtc ggtagagcga 60
 gaagaaggca atggcggccg agagcttctt tttaacntcg gagtccgtga aanangggca 120
 cnccgacaag ctgtgcgacc aggtgtcgga cgccgtgctt gacgcatgcc tcgcgcagga 180
 ccccgacagc aaggtggcct gcgagacctg caccaagacc aacatggtga tgggtgttcgg 240
 cgagatcacg accaaggcga ccg 263

<210> 266
 <211> 295
 <212> nucleic acid
 <213> Zea mays
 <400> 266

cgccctcgacc ggatctcgtc ggactcggat ccgcccgaacc accccgcgcc gccgcagatc 60

tcgacccacg cgctccgcca cgcgtccgcc caccggtccg cccacgcgtc cgcccacgcg 120
tccggtcgga tctgggacga gacgagacga tcccngcctc cctcaaccg gaacttggtt 180
taccocatct catccactg actccacca cccaccgcc cgtgcctcc gccggatctc 240
gtcggactcg gatccgccg accacgacca ccccggttg ncgcgcgca gcagcagcag 300
atcagagaag atggcggac tcgacacctt cctcttcacc tcggagtccg tgaacgaggg 360
acaccctgac aagctctgcg accaggtctc agatgctgtt ctggacgctt gccttgctga 420
ggaccctgac agcanggttg cttgcgagac ctgcaccaag accaacaatgg tcatggcttt 480
ggtgagatca ccaccaagn caatgntgac ttttinaana ntttg 525

<210> 270
<211> 312
<212> nucleic acid
<213> Zea mays

<400> 270

ctgaagatcg tgaaggagaa cttcgacttc aggcccgcga tgatcatcat caacctcgac 60
ctcaagaaag gcggcaacgg gcgtacctc aagacggcgg cctacgggca ctttgggagg 120
gacgaccccg acttcacctg ggagggtgtg aagcccctca aggcgagaaa gccgtcttct 180
gcatgaggcg cctcctctgt tttggaagaa gcttttggtc tggctctggtc tggctctggtg 240
tgctgcgct ctatcatgct ttttatggc tctacttgt gattcttgat ctgccccttg 300
cttatcattg ta 312

<210> 271
<211> 227
<212> nucleic acid
<213> Zea mays

<400> 271

gngagnccac ggcngggggcg cttctccgg caaggacccg accaaggtgg accgcagcgn 60
ggccnactc gcgaggcagn ctgccaanag catcgctgcc gccggcctcn cncgccgcgc 120
cattgtccag gtctcctacg ccatcggcgt gcccgagccc ctttcggtgt tcgtggacac 180
gtacggcacc ggcgcgatcc ccgacaagga gatcctgaag ancgtagg 227

<210> 272

<211> 234
 <212> nucleic acid
 <213> Zea mays

<400> 272

gcagcgcaag angttggtag agcgagcgag nngaaggcaa tggcggcgga gagcttcctg 60
 ttcacctcgg ngtcctgaa cgagggggcac ccagacaagc tgtgcgacca ggtgtcggnc 120
 gcggtgctgg acgcctgcct ggcgcaggac cccgacagca aggtggcctg cgagacctgc 180
 accaagacga acntngtgat ggtgttcggc gagatcncca ccaaggcgag cgtg 234

<210> 273
 <211> 239
 <212> nucleic acid
 <213> Zea mays

<400> 273

cgatgagacc cctgagttga tgcccctcag ccatgtcctt gcagtggctg gcgtcaagcc 60
 caacatcgtt tgacacaaaa ccaatgttgc ggcaggtctc cctgacaatc ttctcgtagt 120
 caacattggc cttggtgggtg atctcaccaa agaccatgac catgttggtc ttggtgcagg 180
 tctcacaagc aaccttgctg tcagggtcct cagcaaggca agcgtcaaga acggcatct 239

<210> 274
 <211> 245
 <212> nucleic acid
 <213> Zea mays

<400> 274

ccctcttgcc ggtcccgaat aaagagcagc agcgcaagag gtcggtagag cgagaagaag 60
 gcaatggcgg ccgagagctt ccttttcacc tcggagtccg tgaacgaggg gcaccccgac 120
 aagctgtgcg accaggtgtc ggacgccgtg cttgacgcat gcctcgcgca ggaccccgac 180
 agcaagggtg cctgcgagac ctgcaccaag accaacaatg tgatgggtgtt cggcgagatc 240
 acgac 245

<210> 275
 <211> 268
 <212> nucleic acid
 <213> Zea mays

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

<400> 278

ccgttcgcct cttctcctcc ctctcgccgg gtccttaata aagagcagca gcgcaagagg 60
 ttggtagagc gagcgagaag aaggcaatgg cggcgagagag cntcctgttc acctcggagt 120
 ccgtgaacga ggggcaccca gacaagctgt gcgaccaggt gtcggacgcg gtgctggacg 180
 cctgcctggc gcaggacccc gacagcaagg tggcctgcga gacctgcacc aagacgaaca 240
 tggatgatgt gttcggcgag atcaccac 268

<210> 279
 <211> 218
 <212> nucleic acid
 <213> Zea mays
 <400> 279

cccgaccaag gtggaccgca gcggggccta cgtcgcgagg caggctgccca agagcatcgt 60
 cgccgcgggc ctgcgccgcc gcgccatcgt ccaggtctcc tacgccatcg ggtgcccgag 120
 cccctatcgg tgttcgtgga cacgtacggc ancggcgcga tccccgacaa ggagatcctg 180
 aagatcgtga aggagaactt cgacttcaag cccggcat 218

<210> 280
 <211> 314
 <212> nucleic acid
 <213> Zea mays
 <400> 280

gccggtcccg aataaagagc agcagcgcaa gaggtcggta gagcgagaag aaggcaatgg 60
 cggccgagag cttccttttc accttcggag tccgtgaacg aggggcaccc cgacaagctg 120
 tgcgaccagg tgcggacgc cgtgcttgac gcatgcctcg cgcaggaccc cgacagcaag 180
 gtggctgcga gactgcacaa gaccaacatg gtgatggtgt tcggcgagat cacgaacaan 240
 gcgacgtgga ctacgagaag atcgtgcgcg acacctgccc gcgagatcgg gttcacctcc 300
 gacgacgtgg gctc 314

<210> 281
 <211> 216
 <212> nucleic acid
 <213> Zea mays
 <400> 281

ctccggaag gacccgacca aggtggaccg cagcggggcc tacgtcgca ggcaggtgc 60
 caagagcatc gtcgcgcgcg gcctcgcccc ccgcgccatt gtccaggtct cctacgccat 120
 cggtgccccg ancccccttc ggtgttcgtg gacacgtacg gcaccggcgc gatccccgac 180
 aaggagatcc tgaagatcgt gaaggagaac ttcgac 216

<210> 282
 <211> 289
 <212> nucleic acid
 <213> Zea mays
 <400> 282

ggccgctttg tcattgggtg acctcacggc gatgctggcc tcaactggcng caagatcatc 60
 attgacacct acggtggctg gggagcccat ggtgggtggcg ctttctccgg caaggaccca 120
 accaaggttg accgcagcgc acctatgtcg caaggcaggc tgccaagagc atcgtcgcca 180
 gcggccttgc tcgcgcgcgc atcgctccagn tgtcttacgc cannggggtgc nngancctct 240
 ctccgtgttc gaaaaanannn anngcnnggn nntcccccaa nggttttct 289

<210> 283
 <211> 247
 <212> nucleic acid
 <213> Zea mays
 <400> 283

ctccctcttg ccggtcccga ataaagagca gcancgcaag aggtcggtag agcgagaaga 60
 aggcaatggc ggccgagagc ttcccttttca cctcggagtc cgtgaacgag gggcaccocg 120
 acaagctgtg cgaccaggtg tcggacgcgc tgcttnangc atgcctcgcg caggaccccg 180
 acagcaaggt ggcccgcgag acctgcacca agaccaacat ggtgatggtg ttcggcgaga 240
 tcacgac 247

<210> 284
 <211> 275
 <212> nucleic acid
 <213> Zea mays
 <400> 284

cgtttgcttc ttctccctct tgccgggtccc gaataaagag cagcagcgca agaggtcggt 60

agagcgagaa gaaggcaatg gcggccgaga gcttcctttt cacctcggag tccgtgaacg 120
 agggggcacc cgacaagctg tgcgaccagg tgtcggacgc cgtgcttgac gcatgcctcg 180
 cgcaggaccc cgacagcaaa gttgctgcga aanctgcacc aagancaaca tggatgatggt 240
 gttcggcgag atcacgacca aggggaccgt ggatt 275

<210> 285
 <211> 255
 <212> nucleic acid
 <213> Zea mays
 <400> 285

cctcttctcc tccctcctgc cgggtcctta ataaagagca gcagcgcaag aggttggttag 60
 agcgagcgag aagaaggcaa tggcggcgga gagcttctctg ttcacctcgg agtccgtgaa 120
 cgagggggcac ccagacaagc tgtgcgacca ggtgtcggac gcggtgctgg acgcctgcct 180
 ggcgaggac cccgacagca aggtggcctg cgagacctgc accaagacga acatggatgat 240
 ggtgttcggc gagat 255

<210> 286
 <211> 221
 <212> nucleic acid
 <213> Zea mays
 <400> 286

gggagccac ggcgggggcn ccttcnccgg caaggaccgg accaaggtgg accgcagcgg 60
 ggctacgtc ncnaggcagg cngccaagag catcgtcncc nccggcctcg ccnccgcnc 120
 cattgtccag gtctcctacg ccacgncctg ccnagcccc ttctcgtgtt cgtggacacn 180
 tacggcaccg gcgcgatccc cnacaaggag atcctgaaga t 221

<210> 287
 <211> 216
 <212> nucleic acid
 <213> Zea mays
 <400> 287

ctctacccag cacgacgaga cagtcaccaa cgacgagatt gctgctgacc tgaaggagca 60
 cgtcatcaag ccagtcaccc ccgagcagta cctcgacgag aagacaatct tccacctcaa 120

cccgctctggc cgcttcgtca tcngcggacc tcacggcgac gctggncnncn ctgnnnccggn 180
 agatcatcat cgacacctan ggttgctggg gagcca 216

<210> 288
 <211> 292
 <212> nucleic acid
 <213> Zea mays
 <400> 288

cgtagctgtc gacacgtacg gcaccggcgc gatccccgac aagganatcc ttcaagattg 60
 tcaaggagaa cttcgatttc aagcctggca tgatcatcat caaccttgac ctcaagaaag 120
 gcggcaacgg gcgctacctc aagacggcgg cctacggcca ctttggaagg gacgacctg 180
 acttcacctg ggaggtggtg aagccacttc aagtcggaga aaccttctgc ctaaggcggc 240
 ctttttttca gtaagaagct tttggtggc tgctgtgctt aatcagcttt ta 292

<210> 289
 <211> 276
 <212> nucleic acid
 <213> Zea mays
 <400> 289

gagaacttcg acttcaggcc cggcatgac atcatcaacc tcgacctcaa gaaaggcggc 60
 aacgggcgct acctcaagac ggcggcctac gggcactttg ggagggaaga ccccgacttc 120
 acctgggagg tggatgaagcc cctcaaggcg gagaagccgt cttctgcatg aggcgcctcc 180
 tctgtttcgg aagaagcttt tggctcggc tgccctgcgt ctatcatgct tttttatggc 240
 tctacgtgt tgtgattctt gatctgcccc ttgctt 276

<210> 290
 <211> 219
 <212> nucleic acid
 <213> Zea mays
 <400> 290

cgccatcggc gtgccggagc cctgtccgt gttcgtcaac tcgtacggca ccggcacgat 60
 ccccgacaag gagatcctca agatcgtgaa ggagaacttc gacttcangc ccgggatgat 120
 cagcatcaac ctcgacctga agaagggcgg caacaggctt atcaagaccg ccgcctacgg 180

ccattcggcc gtgacgacgc cgacttcact gggagtggt 219

<210>	291
<211>	191
<212>	nucleic acid
<213>	Zea mays

<400> 291

catgccgcaa cattggtttc gtgtcgaacg atgtcgggct tgacgctgac cactgcaagg 60

tgcttgatgaa cattgagcag cagtcacctg atattgctca ggggtgtgcac ggccacttca 120

ccaagcgccc cgaggagatt ggagctggtg accaggggca catgtttggg tatgcgactg 180

acqagacccc t 191

<210>	292
<211>	315
<212>	nucleic acid
<213>	Zea mays

<400> 292

gacgagacga gttaccatct catcccaact ccggaacgaa caagttacca tctcatccca 60

actccgcctc gaccggnncn cgtcggactc qganccgccc gaccaccccg cgccgccgca 120

gatcaaagaa gatggcagcn gtcgacacat tcctcttcac ctcggagtct gtgaacgagg 180

gacaccctga caagcncgtgt gaccaggtct cagatgccgt tcttgacgct tgccttgngg 240

aggaccctga cagcaagggtt gcttgtgaga cctgcaccaa gaccaacatg gtcatgggtct 300

ttggtgagan nacca 315

<210>	293
<211>	501
<212>	nucleic acid
<213>	Zea mays

<400> 293

agagcatcgn ggccagcggc ctcgcccgcc gctgcctngt gcaaggtgtc ctancccant 60

nggngtgccg gaaccctgt caatgntcgg cganttctac ggcaccggga ccatncccg 120

caaggagatc ctcaagatcg tcaaggagaa cttcgacttc aggccccggg atnatcacca 180

tcaacctcga cctcaanaaa gggcggcaac aggttcatca agaccgccgc atacngncac 240

tttggcccggt gacgancnca ctttacctgg gaagtgggtca atcccctaaa gaaagccatn 300
 ccncttaaga atgtanttgg naagtttact tggacatgaa gttcattctt ngtctngctt 360
 ctgctgatnc cctnnaanga ttgcttgntn cttgcttgcc cctngattgt ntgttttgan 420
 caantgantt ngcttgntct tgttccatnt gaaaaaccnn attaatngtg gnccttttgg 480
 tgaaaaaaag nttingccna t 501

<210> 294
 <211> 281
 <212> nucleic acid
 <213> Zea mays
 <400> 294

gcctctttctc ctccctcctg ccgggtcctt aataaagagc agcagcgcaa gaggttggtg 60
 gagcgagcga gaagaaggca atggcggcgg agagcttcct gttcacctcg gagtccgtga 120
 acgaggggca cccagacaag ctgtgcgacc aggtgtcgga cgcggtgctg gacgcctgcc 180
 tggcgcagaa ccccgacagc aagtggcctg cgagacctgc accaagacga acatggtgat 240
 ggtgttcggc gaantcacca ccaggggnagn tggatacgaa t 281

<210> 295
 <211> 486
 <212> nucleic acid
 <213> Zea mays
 <400> 295

gggnanttnt tnnagncctt cnacgcgnnc agtaccggtc acagaattcc cgggncgacc 60
 acgcgtccnc ggacgcgtgg gcgacaagga gatcctcang atcgtgaagg agannttcac 120
 ttcaggccccg ggatgatcag catcaacctc gacctgaaga agggcggcaa caggttctca 180
 agaccgccgc ctacggccac ttcggccgtg acnacgccga cttcacctgg gaggtgtgaa 240
 gccctcaag ttcgacaagg catcggttta aggttgggan tgtcaactgtg gacataggac 300
 taccttctctc tggctctgct gttacctgca agcattgctg ctgctggatg tgtggtttga 360
 tcagtgactg gctgctgctc catagaagat gaacggagag aaggatgatg aangcttttg 420
 caatcgccccg ctgcaactgc aacctatgcc atgcgggctt aatgattggg taaattttgg 480
 cttnca 486

<210> 296
 <211> 173
 <212> nucleic acid
 <213> Zea mays

 <400> 296

 tacgtcgcca ggcaggccgc caagagcatc gtggccagcg gcctcgcccg ccgtgcctc 60
 gtgcagggtgt cctacgccat cggcgtgccg gagcccctgt ccgtgttcgt cgactcctac 120
 ggcaccggga ccatccccga caaggagatc ctaaagatcg tcaaggagaa ctt 173

<210> 297
 <211> 278
 <212> nucleic acid
 <213> Zea mays

 <400> 297

 cgcctcttct cctccctcct gccgggtcct taataaagag cagcagcgca agaggttggt 60
 agagcgagcg agaagaaggc aatggcggcg gagagcttcc tgttcacctc ggagtccgtg 120
 aacgaggggc acccagacaa gctgtgcgac cagggtgtcg acgcggtgct ggacgcctgc 180
 ntggcgcagg accccgacag caagggtggc tgcnatnct ncacnangac gaacatggtg 240
 atggtgttcg gcgaaatcac cncnantgcg acntngac 278

<210> 298
 <211> 309
 <212> nucleic acid
 <213> Zea mays

 <400> 298

 ggcgtgccgg agcccctgtc cgtgttcgtc gactcctacg gcaccgggac catccccgac 60
 aaggagatcc taaagatcgt caaggagaac ttcgacttca ggccagggat gatcaccatc 120
 aacctcgacc tcaagaaggg cggcaacagg ttcatacaaga ccgccgcata cggccacttt 180
 ggcntgacga cgccgacttc acctgggagg tggtaagcc cctaaagaag gcatccgctt 240
 aagaatgtat tgggaagttc actggacatg aggttcatct tcgtctggct ctgctgatac 300
 ctgcaagat 309

<210> 299

<211> 197
 <212> nucleic acid
 <213> Zea mays

 <400> 299

 gggagaccng ccgcaacatt ggttttgtgt caaacgatgt tgggcttgac gccgaccacn 60
 gcaaggtgct cgtgaacatt gagcagcagt cccctgatat tgctcagggt gtgcatggcc 120
 acttcaccaa gcgccccgag gagattggag ctggtgacca gggacacatg ttcgggtatg 180
 cgaccgatga gacccct 197

<210> 300
 <211> 253
 <212> nucleic acid
 <213> Zea mays

 <400> 300

 cgtttgcctc ttctccctct tgccgggtccc gaataaagag cagcagcgca agaggtcggt 60
 agagcgagaa gaaggcaatg gcggccgaga gcttcctttt cacctcggag tccgtgaacg 120
 aggggcaccc cgacaagctg tgcgaccagg tgctcgacgc cgtgcttgac gcatgcctcg 180
 cgcaggaccc cgacagcaag gtggctgcga gacctgcacc nagaccaaca tggatgatngt 240
 gttcggcgag atc 253

<210> 301
 <211> 302
 <212> nucleic acid
 <213> Zea mays

 <400> 301

 cgtgaaacga ggggacaccc tgacaagctc tgcgaccagg tctcagatgc tgttctggac 60
 gcttgccttg ctgaggaccc tgacagcaag ttgcttggag acctgcacca agaccaacat 120
 ggtcatggtc tttggtgaga tcaccaccaa ggccaatgtc gactacgaga agattgtcag 180
 gggagacatg ccgcaaaatt ggtttcgngt naganngatg tggggcttga ngntgaccac 240
 ngcanggtgn tnatanaaan ttingnagnan tncctgtat ttgcgcnggg gggnnncncc 300
 nc 302

<210> 302

<211> 460
 <212> nucleic acid
 <213> Zea mays

 <400> 302

 cgccgcccgc ctcgcccgcc gcgccatcgt ccaggtctcc tacgccatcg gcgtgcccga 60
 gccctatcgt gtgttcgtgg acacgtacng gancngngcn anncccgacn agggnaatcn 120
 tganaatngn anaagganaa nttnanantn caggcccggt tgatcattat naacctagac 180
 ctcaanaaag gcggaaacgg gcnctaccta aagacggggg tctacgggcn ctttgngagg 240
 gacgaccgag anttcacctg agagggtgna aagcccctca aggcggaaaa gccgtcttct 300
 gcatgaggcg cctcctctgt ttengaagaa gcttttggtc tggctctgct gcgctctatc 360
 atgctttttt atggctncta cgtgttgtga ttcttgatct gcccttgct tatcatttgt 420
 actgtactgt cactgtccta ataagtggta cgtgtgcggg 460

<210> 303
 <211> 297
 <212> nucleic acid
 <213> Zea mays

 <400> 303

 gtctatgtng caangnacgc tgcnaagagc atngtcnccc agcggccttg ctcgncgcgc 60
 natngnceca ggtgtattat cgccatccgg cnngncngng cntctcnccg tgttcgtcga 120
 cacgtacggc accggcgcgga tccccgacaa gngnncnct gaagattgta caaggagaac 180
 ttcgatttca ggcttggcat gatcatnnnc aaccttganc tcaagaaagg nggcaacggg 240
 cgctacctca agacggcggc ctacggcnac tttggaaggg acgacctga cttcacc 297

<210> 304
 <211> 259
 <212> nucleic acid
 <213> Zea mays

 <400> 304

 cggatctgag acgagacgag ttaccatctc atcccaactc cggaacgaac aagttaccat 60
 ctcatcncaa ctccgtctca ccgaggtccg caagaacgga acctgcccct ggctcaggcc 120
 tgatgggaag acccaggtga cagtogagta ccgcaatgag ggtggtgcca tggtocccat 180

ccgtgtccac accgtcctca tctccacca gcacgaagag acagtgacca atgatgagat 240
cgctgctgac ctgaaggag 259

<210> 305
<211> 244
<212> nucleic acid
<213> Zea mays

<400> 305

cttctcctcc ctctgcgg gtccttaata aagagcagca gcgcaagagg ttggtagagc 60
gagcgagaag aaggcaatgg cggcggagag cttcctgttc acctcggagt ccgtgaacga 120
ggggcaccca gacaagctgt gcgaccaggt gtcggacgag gtgctggacg cctgcctggc 180
gcaggacccc gacagcaagg tggcctgcga nacctgcacc aagacgaaca tggatgatgg 240
gttc 244

<210> 306
<211> 236
<212> nucleic acid
<213> Zea mays

<400> 306

cgtcggactc ggatccgccc gaccacgacc accccgcgcc gccgcgcgc acagcagcag 60
atcagagaag atggccggac tcgacacott cctcttcacc tcggagtcgc tgaacgaggg 120
acacctgac aagctctgcg accaggtctc agatgctgtt ctggacgctt gccttgctga 180
ggacctgac agcaagggtt cttgcgagac ctgcaccaag accaacaatg tcatgg 236

<210> 307
<211> 310
<212> nucleic acid
<213> Zea mays

<400> 307

cccagcacga cgagacagtc accaacgacg agattnctgg gtagagatga ggactgtgtg 60
cacacggatg ggaaccatgg cgccaccctc atctctaccc agcacnacga gacagtcacc 120
aacgacgaga ttgctgctga cctgaaggag cacgtcatca agccagtcac ccccgagcag 180
tacctcgacg agaagacaat cttacacctc aaccgctctg gccgcttcgt catcggcgga 240

cctcacggcg aggtgggcnt nactggccgg angatntcat cganannagg tgtttgggga 300
 nccacggggg 310

<210> 308
 <211> 185
 <212> nucleic acid
 <213> Zea mays
 <400> 308

cctgacagca aggttgcttg cgagacctgc accaagacca acatgggtcat ggtcttttgg 60
 gagatcacca ccaaggccaa tgtcgactac gagaagattg tcaggggagac atgccgcaac 120
 attggtttcg tgtcgaacga tgtcgggctt gacgctgacc actgcaagtg cttgtgaaca 180
 ttgag 185

<210> 309
 <211> 272
 <212> nucleic acid
 <213> Zea mays
 <400> 309

ccgtttgcct cttctccctc ttgccggtcc cgaataaaga gcagcagcgc aagaggtcgg 60
 tagagcgaga agaaggcaat ggcggccgag agcttccttt tcacctcggg agtccgtgaa 120
 cgagggggcac cccgacaagc tgtgcgacca ggtgtcggac gccgtgcttg acgcatgcct 180
 cgcgccaggac cccgacagca aggtggcctg cgagacctgc accaagacca acatgggtgat 240
 ggtgttcggc gagatcacga ccaaggcgac cg 272

<210> 310
 <211> 231
 <212> nucleic acid
 <213> Zea mays
 <400> 310

ctcttctccc tcttgccggt cccgaataaa gagcagcagc gcaagaggtc ggtagagcga 60
 gaagaaggca atggcgggcg agagcttcct ttacacctcg gagtccgtga acgaggggca 120
 ccccgacaag ctgtgcgacc aggtgtcggg cgcctgctt gacgcatgcc tcgcgaggga 180
 ccccgacagc aaggtggcct gcgagacctg caccaagacc aacatgggtga t 231

<210> 311
 <211> 307
 <212> nucleic acid
 <213> Zea mays

<400> 311

gtcggatctg agacgagacg agtcccctcg cntcacccaa ccggaacgaa caagttacca 60
 tctcatccca accccgcctg cgaccggntg tcgtcggact cggntccgcn cgaccacccc 120
 gcgccgcgcg agatcaaaga agatggcagc tctcgacacc ttctctttca cctcggagtc 180
 tgtgaacgag ggacaccctg acaagctctg cgaccaggtc tcagatgccg ttcttgacgc 240
 ttgcnttgct gaggaccctg acagcaaggt tgcttctgag acctgcacca agaccaacat 300
 ggtcatg 307

<210> 312
 <211> 260
 <212> nucleic acid
 <213> Zea mays

<400> 312

catccatccc cgttcgcctc ttctcctccc tcttgccggg tccttaataa agagcagcag 60
 cgcaagaggt tggtagagcg agcgagaaga aggcaatggc ggccggagagc ttctgtttca 120
 cctcggagtc cgtgaacgag gggcaccacg acaagctgtg cgaccagggtg tcggacgcgg 180
 tgctggacgc ctgcctggcg caggaccccg acagcaaggt ggccctgcgag acctgcacca 240
 agacgaacat ggtgatgggtg 260

<210> 313
 <211> 305
 <212> nucleic acid
 <213> Zea mays

<400> 313

tgagacgaga cgagttacca tctcatccca actccggaac gaacaagtta ccatctcatc 60
 ccaactccgc ctcgaccgga tctcgtcgga ctccggtccg cccgaccacc ccgcgccgcc 120
 gcagatcaaa gaagatggca gctgtcgaca cattcctctt cacctcggag tctgtgaacg 180
 agggacaccc tgacaagctc tgtgaccagg tctcagatgc cgttcttgac gcttgccctg 240

ctgaggaccc tgacagcaag gttgcttgtg agacctgcac caagacaaca tggatcatggt 300
ctttg 305

<210> 314
<211> 237
<212> nucleic acid
<213> Zea mays

<400> 314

gaagattntc atggatacct gccgcancat tngntttgtg atcanacgat gctgggnttg 60
acgccnacca ctgnaagggtg cncgtgaana ttgatcanca gtcncctgat attgctcang 120
gtntncatgg ccacttcacc aagcgccccg aggagattgg agctggngac cagggacaca 180
tggttcgggta tgctaccnan tagaccntg agttgatgcc cctcagccat gtccttg 237

<210> 315
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 315

tctcatocca ctgactccgn ccacccaccc gcccgctgcc tccgcggat ctcgtcggac 60
tcggatccgc ccgaccacga ccaccccgcg ccgcccgcgc gcagagcagc agatcagaga 120
agatggccgg actcgacacc ttctctttca cctcggagtc cgtgaacgag ggacaccctg 180
acaagctctg cgaccaggtc tcagatgctg ttctggacgc ttgccttgct gaggaccctg 240
acagcaagggt tgcttgcgag acctgcacca agaccaacat 280

<210> 316
<211> 269
<212> nucleic acid
<213> Zea mays

<400> 316

cgtgaaggag aacttcgact tcaggccccg gatgatcagc atcaacctcg acctgaagaa 60
gggcggcaac aggttcatca agaccgccgc ctacggccac ttcggccgtg acgacgccga 120
cttcacctgg gaggtggtga agccctcaa gttcgacaag gcatcggctt aaggttggga 180
gtgtcactgt ggacatgagg actaccttcc tctggctctg ctgttacctg caagcattgc 240

tgctgctgga tgngtgtgtt tgatcatga 269

<210> 317
 <211> 229
 <212> nucleic acid
 <213> Zea mays

<400> 317

ccgacaagga gatcctaaag atcgtcaagg agaacttcga cttcaggcca gggatgatca 60
 ccatcaacct cgacctcaag aagggcggca acaggttcat caagaccgcc gcatacggcc 120
 actttggccg tgacgacgcc gacttcacct gggaggtggt caagccccta aagaaggcat 180
 ccgcttaaga atgtattggg aagttcatgg acatgagggt catcttcgt 229

<210> 318
 <211> 418
 <212> nucleic acid
 <213> Zea mays

<400> 318

tatcatcgtn nccagctgnc tctnccnncn ggngcctttn gcaagtntcc tangccatcg 60
 ncgtgccnga nccccgtgcc ntgttcgtcg actcctacng naccnggacc atnccccgaca 120
 aggagatcct aaagatcttc aaggagaact tcnacttcan gccanggatg atcaccatca 180
 acctcgacct caagaaggnc ggcaacaggt tcatcaagac cgnccnatac ggcactttng 240
 ccgtgacgac tcctacttca cctgagaagt ggtcaaacc ctaaagaaag cattcnctta 300
 aaaatgtatt nggaanttna actggacatt atgttcatnt ttctctttgg ttcttctnat 360
 acctgcaaag attgctgntt cttctntccn nccttggatg tgtgtttgan caatgant 418

<210> 319
 <211> 267
 <212> nucleic acid
 <213> Zea mays

<400> 319

acgccatcgg cgtgccggag cccctgtccg tgttcgtcga cacctacggc accgnngacc 60
 atccccgaca aggagatcct aaagatcgtc aaggagaact tcgacttcag gccagggatg 120
 atcaccatca acctcgacct cnagaagggn ggcaacnggn tcntnaagan cggnggaana 180

ggctattttgg ncggtgaangg ntccgattca nccctgggtggg gtggtaannc cctnaaangn 240
gnnnnccctgt tnnnaagnttt tgggggag 267

<210> 320
<211> 179
<212> nucleic acid
<213> Zea mays

<400> 320

cccctggctc aggcccgatg ggaagaccca ggtgacantg gagtaccgca acgaggggtgg 60
cgccatgggtt cccatccgtg tgcacacagt cctcatctct acncagcacg acgagacagt 120
caccaacgac gagattgctg ctgacctgaa ggagcacgtc atcaagccag tcattccccg 179

<210> 321
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 321

cttcaogate ttgaggatct ccttgtcggg gatcgtgccg gagaacttcg acttcaggcc 60
cgggatgate agcatcaacc tcgacctgaa gaagggcggc aacaggttca tcaagaccgc 120
cgccacggc cacttcggcc gtgacgacgc cgacttcacc tgggaggtgg tgaagcccct 180
caagttcgac aaggcatcgg ctttaagggtg ggagtgtcac tgtggacatg aggactacct 240
tcctctggtt ctgctgtttac ctgcaagcat tgcctgctgt 280

<210> 322
<211> 294
<212> nucleic acid
<213> Zea mays

<400> 322

ctttttctcc tcttgccggt ccgaataan gagcagcagc gcnagaggtc ggtagagcga 60
gangnaggca atggcgggcg agngttcctt ttcaaccttc ggagtccgtg aacngggggc 120
nccccgaaca agctgtgcga ccagggtgtc gagcgccgtgc ttgatgcatg cctcgcgcn 180
gancccccac agcnaggtgg cctgcgagat ctgcaccaag accaacadtg tgatggtgtt 240
cggcgagatc acgatcaagg cgancgtgga ctacnggaag atcgtgcgcg acac 294

CCCTGCTC AGGCCGATG GGAAGACCCA GGTGACANTG GAGTACCGCA ACGAGGGGTGG

<210> 323
 <211> 280
 <212> nucleic acid
 <213> Zea mays

<400> 323

ggggagccca tgggtggtggc gctttctccg gncaccgtag gtgtncaatg atgatcttgc 60
 ggccagttag gccatcattg acacctacgg tggctgggga gcccatngtg gtggcgcttt 120
 ctccggcaag gacccaacca aggttgaccg cagcggagcc tatgtcgcaa ggctggctgc 180
 caagagcatc gttcgccagc ggccttgctn cgccgcgcca tcgtccaggt gtcttacgcc 240
 atcgntggc ccgagcctct ctccgtgttc gtcgacacta 280

<210> 324
 <211> 273
 <212> nucleic acid
 <213> Zea mays

<400> 324

ccgttcgcct ctttctcctc cctcctgccg ggtccttaat aaagagcagc agcgcaaggt 60
 gagccgccag cttgccccag gttggttagag cgagcgagaa gaaggcaatg gcggcggaga 120
 gcttcctggt cacctcggag tccgtgaacg aggggcaccc agacaagctg tgcgaccagg 180
 tgtcggacgc ggtgctggac gcctgcctgg cgaggaccc cgacagcaag tggctgcgag 240
 acctgcacca agacgaacat ggtgatggtg ttc 273

<210> 325
 <211> 215
 <212> nucleic acid
 <213> Zea mays

<400> 325

ctccctcttg ccggtcccg aataagagca gcagcgcaag aggtcggtag agcgagaaga 60
 aggcaatggc ggccgagagc ttccttttca cctcggagtc cgtgaacgag gggcaccocg 120
 acaagctgtg cgaccaggtg tcggacgccg tgcttgacgc atgcctcgcg caggaccccg 180
 acagcaaggt ggctgcgag acctgcacca agacc 215

<210> 326

<211> 291
 <212> nucleic acid
 <213> Zea mays

 <400> 326

 gggagaactt cgacttcagg cccgggatga tcagcatcaa cctcgacctg aagaagggcg 60
 gcaacagggt catcaagacc gccgcctacg gccacttcgg ccgtgacgac gccgacttca 120
 cctgggaggt ggtgaagccc ctcaagttcg acaaggcatc ggcttaaggt tgggagtgtc 180
 actgtggaca tgaggactac ctccctctgg ctctgtgttt acctgcaagc attgctgtctg 240
 ctggatgtgt gtgtttgatc agtgactggc tgctgtcca tagaagatga a 291

<210> 327
 <211> 173
 <212> nucleic acid
 <213> Zea mays

 <400> 327

 ggtgagatca ccaccaaggc caatgtcgac tacgagaaga ttgtcaggga gacatgccgc 60
 aacattgggt tcgtgtcgaa cgatgtcggg cttgacgtg accactgcaa gtgcttgtga 120
 acattgagca gcagtcccct gatattgctc aggggtgtgca cggccacttc acc 173

<210> 328
 <211> 156
 <212> nucleic acid
 <213> Zea mays

 <400> 328

 angaggggca ccccgacaag ctgtgcgacc aggtgtcgga cgccgtgctt gacgcatgcc 60
 tcgcgagga ccccgacagc aaggtggcct gcgagacctg caccaagacc aacatgggtga 120
 tgggtgtcgg cnagatcacg accanggcga ccgtnt 156

<210> 329
 <211> 178
 <212> nucleic acid
 <213> Zea mays

 <400> 329

 cccacggcgg gggcgccctt tccggcaagg acccgaccaa ggtggaccgc agcggggcct 60

acgtcgcgag gnaggctgcc aagagcatcg tcgccgccgg cctcgcccgc ngcgccattg 120

tccagggtctc ctacgccatc ggcgtgcccg ancccccttc ggtgttcgtg gacacgta 178

<210> 330
<211> 176
<212> nucleic acid
<213> Zea mays

<400> 330

tagttctaga tcggcaagng cnnccnttgn canatgttcg ggtacgccac cgacgagacc 60

cccgagctga tgcgcgtgag ccacgtgctg gccaccaagc tgggcgcgcg cctcaccgag 120

gtgcgcaaga acggcacctg cgcttggtg aggcccgacg gcaagaccca ggtgac 176

<210> 331
<211> 263
<212> nucleic acid
<213> Zea mays

<400> 331

cttctcnctc ttgccggtnn cgnntaaaga ncagcagcgc aagaggtcgg tagagcgatg 60

aagaaggcaa tggcggccgn nagcttcctt ttcacctcng antccgtgaa cgangggcan 120

ccnganaagc tgtgcgncca ngtnctggac gccgtgcttg acgcatgcct cgcgcaggan 180

cccgacagca aggtggatgc gagacctgca taagaccaac atggtgatgg tgttcgncga 240

gatcacgacc aaggcgnccg tgg 263

<210> 332
<211> 225
<212> nucleic acid
<213> Zea mays

<400> 332

cgtttgcctc ttctccctct tgccgggtccc gaataaagag cagcagcgca agaggtcggt 60

agagcgagaa gaaggcaatg gcggccgaga gcttcctttt cacctcggag tccgtgaacg 120

aggggcaccc cgacaagctg tgcgaccagg tgtcggacgc cgtgcntgac gcatgcctcg 180

cgcaggaccc cgacagcaag gtggcctgcg agacctgcac canga 225

<210> 333

<211> 331
 <212> nucleic acid
 <213> Zea mays

<400> 333

gtcggatctg agacgagacg agacgannnc ccctcccctc aaccggaact tgttttaccc 60
 catctcatcc cactgactcc ncccacccac ccgcccgcng cctccgcgg atctcgtcgg 120
 actcggatcc gcncgaccac gaccaccccg cgtcgcggcc gcgcanagca gcagatcaga 180
 gaagatggcc ggactcgaca ccttcctctt cacctcggag tccgtgaacg agggacaccc 240
 tgacaagctc tgcgaccagg tctcagatgc tgttctggac gcttgccctg ctgaggaccc 300
 tgacagcaag gttgcttgcg agacctgcac c 331

<210> 334
 <211> 166
 <212> nucleic acid
 <213> Zea mays

<400> 334

ggaagaccca ggtgacagtg gagtaccgca acgaggggtg cgccatgggt cccatccgtg 60
 tgcacacagt cntcatctct acccagcacg acgagacagt caccaacgac gagattgctg 120
 ctgacctgaa ggagcacgtc atcaagccag tcatccccga gcagta 166

<210> 335
 <211> 170
 <212> nucleic acid
 <213> Zea mays

<400> 335

ccatggttcc catccgtgtg cacacagtcc tcatctctac ccagcacgac gagacagtca 60
 ccaacgacga gattgctgct gacctgaagg agcacgtcat caagccagtc atccccgagc 120
 agtacctcga cgagaagaca atnttccacc tcaaccngtt ggngggttcgt 170

<210> 336
 <211> 247
 <212> nucleic acid
 <213> Zea mays

<400> 336

atcatcaacc tcgacctcaa gaaaggcggc aacgggcgct acctcaagac ggcggcctac 60
gggcactttg ggagggacga ccccgacttc acctgggagg tggatgaagcc cctcaaggcg 120
gagaagccgt cttctgcatg aggcgcctcc tctgtttcgg aagaagcttt tggctctggtc 180
tgctgcgct ctatcatgct tttttatggc tctacgtgt tgtgattctt gatctgcccc 240
ttgctta 247

<210> 337
<211> 196
<212> nucleic acid
<213> Zea mays
<400> 337

gcagtnccct gatatngctc aggggtgtgca tggccacttc accaagcgcc ccgaggagat 60
tngagcnggt gaccaggacg acatgttang gtatgcgacc gatgagacnc ctgagttgat 120
gccccacgc catgtccttg ccaccaagct aggtgcacgt ntcaaccgag gtccgcaaga 180
acggaaccng ccactg 196

<210> 338
<211> 211
<212> nucleic acid
<213> Zea mays
<400> 338

ctccctcttg ccggtcccga ataaagagca gcagcgcaag aggtcggtag agcgagaaga 60
aggcaatggc ggccgagagc ttctttttca cctcggagtc cgtgaacgag gggcaccgcc 120
acaagctgtg cgaccagggtg tcggacgccg tgcttgacgc atgcntcgcg caggaccgcc 180
acagcaaggt ggctgcgag acctncacca a 211

<210> 339
<211> 302
<212> nucleic acid
<213> Zea mays
<400> 339

gacgagacga gttaccatct catcccaact ccggaacgaa caagttacca tctcatccca 60
actnccgct tcgaccggat ctncgtcgga ctcggatccg cccgaccacc ccgcgcgcgc 120

gcagatcaaa gaagatggca gctgtcgaca cattcctctt cacctcggag tctgtgaacg 180
 agggacaccc tgacaagctc tgtgaccagg tctcagatgc cgttcttgac gcttgccttg 240
 ctgaggaccc tgacagcaag ttgcttgtga gactgcacca agaccaacat ggtcatggtc 300
 tt 302

<210> 340
 <211> 263
 <212> nucleic acid
 <213> Zea mays
 <400> 340

tcgacttcag gcccgggatg atcagcatca acctcgacct gaagaagggc gncaacaggt 60
 tcatcaagac cgccgcctac ggccacttcg gccgtgacga cgccgacttc acctgggagg 120
 tgggtgaagcc cctcaagttc gacaaggcat cggtttaagg ttgggagtgt cactgtggac 180
 atgaggacta ccttcctctg gctctgctgt tacctgcaag cattgctgct ctggatgtgn 240
 gtgttaatca ganactgctg etc 263

<210> 341
 <211> 300
 <212> nucleic acid
 <213> Zea mays
 <400> 341

cttcgnactt caggccccggg atgatcagca tcaacctcga cctgaagaag ggcggaaca 60
 ggttcatcaa gaccgccgcc tacggccact tcggccgtga cgacgccgac ttcacctggg 120
 aggtggtgaa gcccctcaag ttcgacaagg catcggtta aggttgggag tgtcactgtg 180
 gacatgagga ctaccttct ctggctctgc tgttacctgc aagcattgct gctgctggat 240
 gtgtgtgttt gatcagtgc tggctgctgc tccatagaag atgaacggag agaaggatga 300

<210> 342
 <211> 249
 <212> nucleic acid
 <213> Zea mays
 <400> 342

atccgtttgc ctcttctccc tcttgccggt cccgaataaa gancagcagc gcaagaggtc 60

ggtanagcga gaagaaggca atggcgccg agagttcctt ttcacntcgg agtccgtgaa 120
cgagggggcac cccgacaagc tgtgcgacca gntgtcggac gccgtgcttg angcatgnct 180
cgcgccaggac cccgacagca aggtggcctg cgagactgca ccaagaccaa nntgggtgatg 240
gtgttcggc 249

<210> 343
<211> 196
<212> nucleic acid
<213> Zea mays
<400> 343

caatctncca cntcaacccg nctgagncgc ttcgncatcg gcggacctca cggcgacgcn 60
ggntcantg gccggaagat acatcatcga cacctacggn ggctggggag cccacggcgg 120
gggcgcctnc tccggcaagg ncccgaccaa ggtggacngc agcggggcct acgtcgcgan 180
gnaggctgcc aagagc 196

<210> 344
<211> 249
<212> nucleic acid
<213> Zea mays
<400> 344

atcaacctcg acctcaagaa aggcggcaac gggcgctacc tcaagacggc ggccctacggg 60
cactttggga gggacgaccc cgacttcacc tgggaggtgg tgaagccct caaggcggag 120
aagccgtctt ctgcagaggc gcctcctctg ttttgaaga agcttttggg ctgncctggg 180
ctgggtctggg gtgcncgcg ctctatcatg cttttttatg gctcctactt gtgattcttn 240
atctgcccc 249

<210> 345
<211> 143
<212> nucleic acid
<213> Zea mays
<400> 345

cgactcctac ggcaccggga ccatccccga caaggagatc cttaaagatcg tcaaggagaa 60
cttcgacttc aggccaggga tggtcacat caacctcgac ctcaagaagg gcggcaacag 120

<211> 147
 <212> nucleic acid
 <213> Zea mays

 <400> 349

 ccgacaagga gatcctaaag atcgtcaagg agaacttcga cttcaggcca gggatgatca 60
 ccatcaacct cgacctcaag aagggcggca acaggttcat caagaccgcc gcatacggcc 120
 actttggccg tgacgacgcc gacttca 147

<210> 350
 <211> 264
 <212> nucleic acid
 <213> Zea mays

 <400> 350

 cttctccctc ttgccggtcc cgaataaaga gcagcagcgc aagaggtcgg tagagcgaga 60
 agaaggcaat ggcggccgag agcttctttt tcacctcgga gtccgtgaac gaggggcacc 120
 ccgacaagct gtgcgaccag tgtggacgcc gtgcttnacg catgcctcgc gcagaccccg 180
 acagcaaggt ggctgcgag acctgcacca agaccaacaa tgtgatngtg ttcggcgaga 240
 tnagancaaa gngactgnga tnca 264

<210> 351
 <211> 235
 <212> nucleic acid
 <213> Zea mays

 <400> 351

 cgctctttct cctccctcct gccgggtcct tantaaagag cagcagcgca agaggttggt 60
 agagcgagcg agaagaaggc aatggcggcg gagagcttcc tgttcacctc ggagtccgtg 120
 aacgaggggc acccagacaa gctgtgcgac caggtgtcgg acgcggtcnt gacggcttcc 180
 tggngcagga ccccgacagc aaggtggcct gcgagacctg caccaagang aacat 235

<210> 352
 <211> 211
 <212> nucleic acid
 <213> Zea mays

 <400> 352

cgtttgccctc ttctccctct tgcgggtccc gaataaagag cagcagcgca agaggtcggt 60
agagcgagaa gaaggcaatg gcggccgaga gcttcctttt cacctcggag tccgtgaacg 120
aggggcaccc cgacaagctg tgcgaccagg tgcgggacgc cgtgcttgac gcatgcntcg 180
cgcaggaccc cgacagcaag gtggcctgcn a 211

<210> 353
<211> 212
<212> nucleic acid
<213> Zea mays
<400> 353

gttttgcntct tctccctctt gccgggtccc aataaagagc agcagcgcaa gaggtcggta 60
gagcgagaag aaggcaatgg cggccgagag cttccttttc acatcggagt ccggtgaacga 120
gggncaacnc gacaagctgt gcgaccagggt gtcgggacgc gtgcttgacg catgcntcgc 180
gcaggacccc gacagcaagg tggcctgcga ga 212

<210> 354
<211> 490
<212> nucleic acid
<213> Zea mays
<400> 354

taaagatcgt caaggagaac ttcgacttca ggccagggat ggtcaccatc aacctcgacc 60
tcaagaaggc cggcaacagg ttcacatcaaga ccgccgcata cggccacttt ggccgtgacg 120
acnccgactt cacctgggag gtggtcaagc ccctaaagaa ggcacccgct taagaatgta 180
ttgggaagtt cactggacat gaggttcac ctcgtctggc tctgctgata cctgcaagga 240
tnnnnnnnnn nnnnnnnnnc ctggatgtgt gtttgatcag tgactggctg ctctgctcca 300
tagaagatga atgaagagag agatggtgaa naaggctttg gcaaattggc attgccgaac 360
aagccatgtc gcnccactga ccggcttaac gattgggtata atttgggtgtg gcaacancca 420
ggattaatgc cctgggnctt ttatcnttac tactaanttg ggctngtccg gtatctaatt 480
ttctttccct 490

<210> 355
<211> 389
<212> nucleic acid

<213> Zea mays

<400> 355

gnnnaggccn ttgananggg gggnttnatg aatcngtacc ggtccggaat tcccgggtcg 60

acccacgcgt ccgcggacgc gtgggcctcg acctcaagaa aggcggcaac gggcgctacc 120

tcaagacggn ggcttacggg cactttggga gggacgaccc cgacttcacc tgggaggtgg 180

tgaagccct caaggcggag aagcgtctt ctgcatgagg cgctcctct gtttcggaag 240

aagcttttg tctggctctgc ctgcgtctta tcatgctttt ttatggctcc tacgtgttgt 300

gattcttgat ctgccccttg cttatcattt gtattgtact gtcactgtcc taataagtgg 360

tacgtgtgcg gggtcgtatt gtgtctgct 389

CGTGGTCTG
GATGATCA
GCTCAACCT
CGACCTGAAG
AAGGGCGGCA
ACAGGTTTCA
TCAAGACCGC
GCTACGGCC
ACTTCGGCCG
TGACGACGCC
GACTTCACCT
GGGAGGTGGT
GAAGCCCCTC
AAGTTCGACA
AGGCATCGGC
TTAAGGTTGG
GAGTGTCACT
GTGGACATGA
GGACTACCTT
CCTCTGGCTC
TGCTGTTACC
TGCAAGCATT
GCTGCTGCTG
GATGTGTGTG
TTTGATCAGT
GACTGGCTGC
TGCTCCATAG
AAGA

<210> 356

<211> 289

<212> nucleic acid

<213> Zea mays

<400> 356

gtcggatctg agacgagacg agtccccctcc cccacctcg cctcacccaa ccggaacgaa 60

caagttacaa tctcatccca acccgcctc gaccggatct cgtcggactc ggatccgccc 120

gaccaccccg cgccgccgca gatcaaagaa gatggcagct gtcgacacat tcctcttcac 180

ctcggagtct gtgaacgagg gacaccctga caagctctgt gaccaggtct cagatgccgt 240

tcttgacgct tgccctgctg aggaccctga cagcaagggt gcttgtgag 289

<210> 357

<211> 264

<212> nucleic acid

<213> Zea mays

<400> 357

gggatgatca gcatcaacct cgacctgaag aagggcggca acaggttcat caagaccgcc 60

gctacggcc acttcggccg tgacgacgcc gacttcacct gggaggtggg gaagcccctc 120

aagttcgaca aggcacggc ttaagggttg gagtgtcact gtggacatga ggactacctt 180

cctctggctc tgctgttacc tgcaagcatt gctgctgctg gatgtgtgtg tttgatcagt 240

gactggctgc tgctccatag aaga 264

<210> 358
 <211> 263
 <212> nucleic acid
 <213> Zea mays

 <400> 358

 gggatgatca gcatcaacct cgacctgaag aagggcggca acaggttcat caagaccgcc 60
 gcctacggcc acttcggccg tgacgaagcc gacttcacct gggagggtgt gaagcccctc 120
 aagttcgaca aggcacggc ttaagggttg gagtgtcact gtggacatga ggactacctt 180
 cctctggctc tgctgtnacc tgcaagcntt gctgctgctg gatgtntgtg ttgatcagt 240
 gantggctgc tgctccatag ang 263

<210> 359
 <211> 268
 <212> nucleic acid
 <213> Zea mays

 <400> 359

 gagacgagac gagttaccat ctcatcccaa ctccggaacg aacaagttac catctcatcc 60
 caactccgcc tcgaccggat ctgctcggac tcggatccgc ccgaccaccc cgcgccgccg 120
 cagatcaaag aagatggcag ctgtcgacac attcctcttc acctcggagt ctgtgaacga 180
 gggacaccct gacaagctct gtgaccaggt ctcatatgcc gttcttgacg cttgccttgc 240
 tgaggaccct gacagcaagg ttgcttgt 268

<210> 360
 <211> 289
 <212> nucleic acid
 <213> Zea mays

 <400> 360

 gtcggatctg agacgagacg agtccccctc cccacctnc gcctcaccca accggaacga 60
 acaagttaca attctcatcc caaccccgcc tcganccgat ctgctcggac tcggatccgc 120
 ccgaccaccc cgcgccgccg cagatcaaag aagatggcag ctgtcgacac attcctcttc 180
 acctcggagt ctgtgaacga gggacaccct gacaagctct gtgaccaggt ctcatatgcc 240
 gttcttgacg cttgccttgc tgaggaccct gacagcaagg ttgcttgtg 289

<210> 361
 <211> 252
 <212> nucleic acid
 <213> Zea mays

<400> 361

ctctttctccc tcttgccggt cccgaataaa gagcagcagc gcaagaggtc ggtagagcga 60
 gaagaaggca atggcggccg agagcttcct tttcacctcg gaggccgtga acgaggggca 120
 cccgacaagc tgtgcgacca ggtgtcggac gccgtgcttn acgcatgcct cggcaggacc 180
 ccgaaacaag tggttgaga ccttcaccaa gancaatntg gtgatggtgt tcgngaatc 240
 acgacaaggc ga 252

Sequence 1

<210> 362
 <211> 246
 <212> nucleic acid
 <213> Zea mays

<400> 362

gatcagcatc aacctcgacc tgaagaaggc cggcaacagg ttcataaga ccgccgcta 60
 cggccacttc ggccgtgacg acgccgactt cacctgggag gtggtgaagc ccctcaagtt 120
 cgacaaggca tcggcttaag gttgggagtg tcaactgtga catgaggact accttcctct 180
 ggctctgctg ttacctgcaa gcattgctgc tgctggatgt gtgtgtttga tcagtgactg 240
 gctgct 246

<210> 363
 <211> 240
 <212> nucleic acid
 <213> Zea mays

<400> 363

cgacctggnc gnggacgcgt ggcnnagaacg cgtngggccc ggcctcganc cgcncgcca 60
 ttgtccagga tntctacgc cangcggctg cccanancec ctttcgggtgt tcgtggacac 120
 gtacggcacc ggcgcgatcc ccgacaagga gatcctgaag atcgtgaagg agaacttcga 180
 cttcaggccc ggcatgntca tcatcaacct cgacctcaag aaaggcngca agggcgctact 240

<210> 364

<211> 270
 <212> nucleic acid
 <213> Zea mays

 <400> 364

 gacgagacga gtccctccc cccacctacg cctcaccaca ccggaacgaa caagttacaa 60
 tctcatccca accccgctn cgaccggatc tegtccgact cggatccgcc cgaccacccc 120
 gcgccgccgc agatcaaaga agatggcagc tgtcgacaca ttctcttca cctcggagtc 180
 tgtgaacgag ggacacctg acaagctctg tgaccaggtc tcagatgccg ttcttgacgc 240
 ttgccttgct gaggacctg acagcaaggt 270

<210> 365
 <211> 252
 <212> nucleic acid
 <213> Zea mays

 <400> 365

 ttctagatcg cgggcggccg ctgcgccacg cgtccgatcc ccgttcgcct cttctcctcc 60
 ctctgcccgc gtccttaata aagagcagca gcgcaagagg ttggtagagc gagcgagaag 120
 aaggcaatgg cggcggagag cttctgttc acctcggagt ccgtgaacga ggggcaccca 180
 gacaagctgt gcgaccagggt gtengacgen gtgctggacg cctgcctggc gcaggacccc 240
 gacagcaagg tg 252

<210> 366
 <211> 320
 <212> nucleic acid
 <213> Zea mays

 <400> 366

 gtccgatctg agacgagacg angnngccct cccctcaacc ggaacttggt ttaccccatc 60
 tcatcccact gactcngcc acccaann ncnntgcctc cgccggatct cgtcggactc 120
 ggatccgccc gaccacgacc accccgcgcc gccgcgcgc agagcagcag atcagagaag 180
 atggccggac tcgacacctt cctcttnacc tcggagtccg tgaacgaggg acacctgac 240
 aagctctgcg accaggctct agatgctggt ctggacgctt gccttgctga ggacctgac 300
 agaaagttgt tgcgagactg 320

<210> 367
 <211> 274
 <212> nucleic acid
 <213> Zea mays

 <400> 367

 ggccgggtcg gatctgagac gagacgagtt accatctcat cccaactccg gaacgaacaa 60
 gttaccatct catcccaact ccgcctcgac cggatctcgt cggactcgga tccgcccgac 120
 cccccgcgc cgcgcgagat caaagaagat ggcagctgtc gacacattcc ttttcacctc 180
 ggagtctgtg aacgagggac accctgacaa gctctgtgac caggtctcag atgccgttct 240
 tgacgcttgc cttgctgagg accctgacag caag 274

<210> 368
 <211> 271
 <212> nucleic acid
 <213> Zea mays

 <400> 368

 gtcggatctg agacgagacg agttaccatc tcatcccaac tccggaacga acaagttacc 60
 atctcatccc aactccgcct cgaccggatc tcgtcggact cggatccgcc cgaccacccc 120
 gcgcgcgcgc agatcaaaga agatggcagc tgtcgacaca ttctcttca cctcggagtc 180
 tgtgaacgag ggacacctg acaagctctg tgaccaggtc tcagatgccg ttcttgacgc 240
 ttgccttget gaggacctg acagcaagtt g 271

<210> 369
 <211> 274
 <212> nucleic acid
 <213> Zea mays

 <400> 369

 gacgagacga gtccccnnc ccccaactac gcctcaccca accggaacga acaagttaca 60
 atactgcac ccaacccgcg ctgcaccgga tctcgtcgga ctcgatccg cccgaccacc 120
 ccgcgcgcgc gcagatcaaa gaagatggca gctgtcgaca cattcctctt cacctcggag 180
 tctgtgaacg agggacaccc tgacaagctc tgtgaccagg tctcagatgc cgttcttgac 240
 gcttgcttg ctgaggaacc tgacagcaag gttg 274

<210> 370
 <211> 203
 <212> nucleic acid
 <213> Zea mays

 <400> 370

 ctctttctccc tcttgccgnt cccgaataaa gagcagcagc gcaagaggtc ggtagagcga 60
 gaagaaggca atggcgggcg agagcttctt ttacacntcg gagtccgtga acgaggggca 120
 cgccgacaag ctgtgcgacc aggtgtcgga cgccgtgctt gacgcatgcc tcgcgagga 180
 cnccgacagc aagtggcctg cga 203

<210> 371
 <211> 201
 <212> nucleic acid
 <213> Zea mays

 <400> 371

 gcctcttctc ctccctcttg ccgggtcctt aataaagagc agcagcgcaa gaggttggta 60
 gagcgagcga gaagaaggca atggcgggcg agagcttctt gttcacctcg gagtccgtga 120
 acgaggggca cccagacaag ctgtgcgacc aggtgtcgga cgcggtgctg gacgcctgcc 180
 tggcgagga ccccgacagc a 201

<210> 372
 <211> 307
 <212> nucleic acid
 <213> Zea mays

 <400> 372

 tcagcatcaa cctcgacctg aagaagggcg gcaacagggt catcaagacc gccgcctacg 60
 gccacttcgg ccgtgacgac gccgacttca cctgggaggt ggtgaagccc ctcaagttcg 120
 acaaggcatc ggcttaaggt tgggagtgtc actgtggaca tgaggactac ctctctctgg 180
 ctctgctgtt acctgcaagc attgctgctg ctggatgtgt gtgtttgatc agtgactggc 240
 tgctgctcca tagaagatga acggagagaa ggatgatgaa gggctttggc aatcgccgct 300
 gcaactg 307

<210> 373

<211> 283
 <212> nucleic acid
 <213> Zea mays

 <400> 373

 gtcttacgcc atcgggtgcc cgagcctctc tccgtgttcg tcgacacgta cggcaccggc 60
 gcgatccccg acaaggagat nctcaagatt gtcaagngaa ttcgatttca ggcctggcat 120
 gatcatcatc aaccttgact caagaaaggc ggcaacgggc gctactcaag acgcggccta 180
 cggcactttg gaaggagacc tgattcactg ggagtgggtga accatcaatg gagaacttgc 240
 tcnnngctat tatataantt gtgcgttctg actatngtta nag 283

<210> 374
 <211> 181
 <212> nucleic acid
 <213> Zea mays

 <400> 374

 cttgccggtc ccgaataaag agcanncagc gcaagagntc ggtagagcga caagaaggca 60
 atggcgggccg agagcttcct tttcaoctcg gagtccgtga acgaggggca ccccgacaag 120
 ctgtgcgacc aggtgtcgga cgccgtgctt gacgcatgcc tcgcgcagga ccccgacagc 180
 a 181

<210> 375
 <211> 201
 <212> nucleic acid
 <213> Zea mays

 <400> 375

 ctgccgggtc cttaataaag agcagcagcg caaggngagc cgccagcttg cccaggttg 60
 gtagagcgag cgagaagaag gcaatggcgg cggagagctt cctgttcacc tcggagtccg 120
 tgaacgaggg gcacccagac aagctgtgcg accaggtgtc ggacgcggtg ctggacgcct 180
 gcctggcgca ggaccccgac a 201

<210> 376
 <211> 216
 <212> nucleic acid
 <213> Zea mays

<400> 376

acatccatcc cggttcgctt cttctcctcc ctccctgccg gtccttaata aagagcagca 60
 gcgcaagagg ttggtagagc gagcgagaag aaggcaatgg cggcggagag cttcctgttc 120
 acctcggagt ccgtgaacga gtggcaccca gacaagctgt gcgaccaggt gtcggacgcg 180
 gtgctggacg cctgcctggc gcaggacccc gacagc 216

<210> 377

<211> 130

<212> nucleic acid

<213> Zea mays

<400> 377

gtcgaacgat gtcgggcttg acgtgacca ctgcaagggt cntgtgaaca ttgagcagca 60
 gtcccctgat attgncagg gtgtgcacgg ccacttcacc aagcgccccg aggagattng 120
 agctgggtgac 130

<210> 378

<211> 306

<212> nucleic acid

<213> Zea mays

<400> 378

gtcggatctg agacgagacg agacgatccc ccctcncctc aaccggaact tgtttttaccc 60
 catctcatcc cactgantcc acccaccac ccgcccngtg cntccgccgg atntcgtcgg 120
 actcggatcc gcccgaccac gaccaccccg cgtcgccgcc gcgcanagca gcagatcaga 180
 gaagatggcc ggactcgaca ctttctctt cacctcggag tccgtgaacg agggacaccc 240
 tgacaagctc tgcgaccagg tctcagatgc tgttctggag gnttgcttg ctgaggaccc 300
 tgacag 306

<210> 379

<211> 313

<212> nucleic acid

<213> Zea mays

<400> 379

gagacgagac gannnnccct ccctcaacc ggaacttggt ttaccccatc tcatccact 60

gactccanen acccaccgc ncgctgcctc cgccggatct cgtcggactc ggatccgccc 120
gaccacgacc accccgcgtc gccgccgcgc agagcagcag atcagagaag atggccggac 180
tcgacacctt cctcttcacc tcggagtcgc tgaacgaggg acaccctgac aagctctgga 240
ccaggtctca gatgctgttc tggacgcttg ccttgctgag gacctgacag caaggttgct 300
tgggagacct gca 313

<210> 380
<211> 134
<212> nucleic acid
<213> Zea mays
<400> 380

gcngacctca nggagcacgt catcaagcnc gtgatccctg agaagtacct cgacgagang 60
accatcttcc acctcaacct gtccgggcgc ttcgtcatcg gcnggccccca cggtnacncc 120
ngentcacng gtgc 134

<210> 381
<211> 294
<212> nucleic acid
<213> Zea mays
<400> 381

ccgggtcggg tctgagacga gacgagttac catctcatcc caactccgga acgaacaagt 60
taccatctca tcccaactcc gcctcgaccg gatctcgtcg gactcggatc cgcccgacca 120
ccccgcgccg ccgcagatca aagaagatgg cagctgtcac acattcctct tcacctcgga 180
gtctgtgaac gagggacacc ctgacaagct ctgtgaccag gtctcagatg ccgttcttga 240
cgcttgccct gctgaggacc ctgacagcaa ggttgcttgt gagactgcac caag 294

<210> 382
<211> 164
<212> nucleic acid
<213> Zea mays
<400> 382

cctgagttga tgcccctcag ccatgtcctt gccagcaaac taggtgctcg tntcaccgag 60
gtccgcaaga gcggaaacct gccctgggt acaggcctga tgggaagacc caggtgacag 120

tcgagtaccg cantgagggt ggtgccatgg tccccatccg tntc 164

<210> 383
<211> 247
<212> nucleic acid
<213> Zea mays

<400> 383

cggagaaacc ttctgnctaa ggccgccgtn ttgaggtagh gnccgtngcc gactttcttg 60
nggnnnagggt tgatnatgat catgccaggc ctgaaatcga agttctcctt gacaatcttg 120
aggatctcct tgtcggngat cagngccagt gcacgtacag ngtnacgaa cacnganaga 180
ngctcgggca ctccnntnnc ngtaagacan ctggacnatg gttagtgnaa gtnatncnt 240
tgaanac 247

<210> 384
<211> 207
<212> nucleic acid
<213> Zea mays

<400> 384

cacgtctaata cagacatttt actcagaagt catctttgct tgccgggtccc gaataaagag 60
cagcagcgca agagggtcggg agagcgagaa gaaggcaatg gcggccgaga gcttcctttt 120
cacctcggag tccgtgaacg aggggcaccc cgacaagctg tgcgaccagg tgtcggacgc 180
cgtgcttgac gcatgcctcg cgcagga 207

<210> 385
<211> 292
<212> nucleic acid
<213> Zea mays

<400> 385

gggtcggatc tgagacgagg cgagacgacc cccctcccc tcaaccggaa cttgtttttac 60
cccatctcat cccacagnct ccacccanne gcccgctgcc tccgcccgat ctgctcggac 120
tcggatccgc ccgaccaccc cgcgcgcgcg ccgcgcagag cagcagcaga tcagagaaga 180
tggccggact cgacaccttc ctcttcacct cggagtcctg gaacgaggga caccctgaca 240
agctctgcga ccagggtctca gatgctgttc tggacgcttg ccttgctgag ga 292

<210> 386
 <211> 142
 <212> nucleic acid
 <213> Zea mays

 <400> 386

 cgcgcgccctc accgaggtgc gcaagaacgg nncacctgcg cctggctgag gcccgaacggc 60
 aagaccacagg tgacggtgga gtacntgaac gagggcgggcg ccatggtgcc cgtccgcntg 120
 cacaccgtgt catctccaca ca 142

<210> 387
 <211> 137
 <212> nucleic acid
 <213> Zea mays

 <400> 387

 gngggcgacc agggccacnt gnncgggtac gccaccgacg agacccccga gctgatgcng 60
 ctgagccacg ngntggccac caagntgggc gcgcgcntca ccgangngcg caagaacggc 120
 acntggcnen tggngga 137

<210> 388
 <211> 159
 <212> nucleic acid
 <213> Zea mays

 <400> 388

 gaaaggcggc aacgggcgct acctcaagac ggcggcctac gggcactttg ggaggnacga 60
 ccccgacttc acctggnagg tggtgaagcc cctcaaggcg gagaagccgt cttctgcatg 120
 aggcgcctcc tctnttttgn aagangcttt tggtcnggt 159

<210> 389
 <211> 268
 <212> nucleic acid
 <213> Zea mays

 <400> 389

 gacgagacga gtccctctcc cccacctgcg ctcaccaaac cggaacgaac aagttacaat 60
 ctcatcccaa cccgcctcg accggatctc gtcggactcg gatccgcccg accaccccg 120

gccgccgcag atcaaagaag aggcagctgt cgacacattc ctcttcacct cggagtctgt 180
 gaacncggga caccctgaca agctctgtga ccangtotca gatgccgttc ttgacgcttg 240
 ccttgetgag gaccctgaca gcaaggtt 268

<210> 390
 <211> 282
 <212> nucleic acid
 <213> Zea mays
 <400> 390

aagaagggcg gcaacagggt catcaagacc gccgcctacg gccacttcgg ccgtgacgac 60
 gccgacttca cctgggaggt ggtgaagccc ctcaagttcg acaaggcatc ggcttaaggt 120
 tgggagtgtc actgtggaca tgaggactac cttcctctgg ctctgctgtt acctgcaagc 180
 attgctgctg ctggatgtgt gtgtttgatc agtgactggc tgctgcttcc atagaagatg 240
 aaggagagaa ggatgatgaa gggctttggc aatcgccgcg ca 282

<210> 391
 <211> 272
 <212> nucleic acid
 <213> Zea mays
 <400> 391

caacggggcg tacctcaaga cggcggccta cggccacttt ggaagggacg accctgactt 60
 cacctgggag gtggtgaagc cactcaagtc ggagaaacct tctgcctaag gcggcctttt 120
 tttttcagta agaagctttt ggtggtctgc tgtgcttaat catgctttta tatggcttct 180
 acatgttggt gttcttttct gatctgcacc gcgcttatcg tttgtgttgt actgccctaa 240
 taagtgggtc tatgaggact gtttctgggt tt 272

<210> 392
 <211> 291
 <212> nucleic acid
 <213> Zea mays
 <400> 392

cggatctgag acgagacgag acgannnncc ctccctcaa ccggaacttg ttttacccca 60
 tctcatccca ctgnctccn gccaccaccc cgcncgtgc ctccgcgga tctcgtcgga 120

ctcggatccg cccgaccacg accacccccg gtcgccgccg cgcagagcag cagatcagag 180
aagatggccg gactcgacac cttcctcttc acctcggagt ccgtgaacga gggacaccct 240
gacaagctct ggcaccaggt ctcagatgct gttctggacg cttgccttgc t 291

<210> 393
<211> 531
<212> nucleic acid
<213> Zea mays

<400> 393

agnnnnnnnn natntaatga atttnangaa tgctctaccn gnaattcccg ggtcgaccca 60
cgcgtccgnc cacncgtccg angagatcct caagatcgng aaggagaact tcgacttcag 120
gcccnagnatg atcagcatca acctngacct gaanaaggnc ggcaacaggt tcatcaagac 180
cgacgcctac agtcacttcn gncgtgacga cncgcactta cctgggnaggt ggtgaacccc 240
tcaagttcga caaggcatcg ncttaaggct gngaagtgct cactgtggac attgaggact 300
accttactct ggctctgntg gtacctgcaa agcattggct gctgatggat gtntgngnct 360
gatcaagnga ctggctgctg cttcatanna gatntaccgg aganaaagat gatgnataaa 420
ggcttnggca atcggcggtt canctgnaac ccatgccatt ccgcttanng aatggggata 480
anttggcttg gaaanaanca tcattattat ggncatgaact ttcattctta c 531

<210> 394
<211> 572
<212> nucleic acid
<213> Zea mays

<400> 394

ggggggnnnng gnaacttcta tntcgnccgc cacgggtccaa aaaatcccgg ggtccgaccc 60
acgcgttccg aggcnaacttt tctcccgga aagggaacca aaccaaaggg tttgaaccnc 120
aagccgggaa ccctaatttt cgcaaagggg caanggctng cccaaagaac caatccgtcc 180
gccaagccg ggccctttgc ctccgcccgc cgccaatccg ttccaangat tgtcttaacg 240
ccaatccgng cgttnccccg aaacctctct ccgttggtcg tcgacaenta cggcaccngg 300
cgcgatcccc gacaaggaan atnctcaaga ttgtcaagga agaacttcna tttcaggcct 360
gngcatgac atcatcaacc ttgacctcaa gaaangcggc aacggggcgc tacctcaaag 420

acggcggcct aaggccactt tgggaaaggg acnaaccctg aattcaacct ggggaagggtt 480
 gttgaaagcc aactcaaaag ttccgaaaaa aanccttctg gcccnaaagg cgggcccttt 540
 ttttcnagtt aanaaaccct ttgggggggg nc 572

<210> 395
 <211> 127
 <212> nucleic acid
 <213> Zea mays

<400> 395

cagcggcctt gctcgcngcg ccacgtccca ggtgtcttac gccatcggcg tgcccgatnc 60
 ctctctccgt gttcgtcgac acgtacggca ccggcgcgat ccccgacaag gngatcctca 120
 agattgt 127

<210> 396
 <211> 294
 <212> nucleic acid
 <213> Zea mays

<400> 396

tcggnatctg agaagagacg agaagannnn ccctccctc aaccggaact tgttttaccc 60
 catctcatcc cactgactcc ntnnancnac ccgcangctg cctccgncgg atctcgtcgg 120
 actcggatcc gcccgaccac gaccaccccg cgtcgcgcc gcgcagagca gcagatcaga 180
 gaagatggcc ggactcgaca ccttcctctt cacctcggag tccgtgaacg agggacaccc 240
 tgacaagctc tgcgaccagg tctcagatgc tgttctggac gcttgcttgc tgag 294

<210> 397
 <211> 270
 <212> nucleic acid
 <213> Zea mays

<400> 397

cgantnacca tctcatccnc aactccggaa cgaacaagtt accatctcat ccanacttcc 60
 gctcgcaccg gatctngtcg gactcggatc cggccganca ccccgnggcc gccgcngatc 120
 ngagaagatg gcagctgtcg acacattcct cttnagctnc ggagtctgtg aacgagggac 180
 accctgacaa gncctgtgac caggtctcag atgccgtctt gacgcntgcn ttgctgagga 240

ccctganagc naaggtgctt gtganacctg 270

<210> 398
<211> 284
<212> nucleic acid
<213> Zea mays

<400> 398

catcaacctc gacctcaaga ngggcggcaa caggttcadc aagaccgccg catacggcca 60
ctttggccgt gacgacgccg acttcacctg ggaggtggtc aagcccctaa agaaggcatc 120
cgcttaagaa tgtattggga agttcactgg acatgaggtt catottcgtc tggctctgct 180
gatacctgca aggatnnnnn nnnnnnnnnn nnnnnnnnga tgtgtgtttg atcagtgact 240
ggctgctctg ctccatagaa gatgaatgaa gagagagatg gtga 284

<210> 399
<211> 297
<212> nucleic acid
<213> Zea mays

<400> 399

atctgagacg agacgnngnc nncctcncct caaccggaac ttgttttacc ccatctcadc 60
ccantganc nagnnannca cncgcncgt gentccgncg gatctcttcg gactcggatc 120
cgcccganca cgaccanccc gcgcgcgcgc cgcgcagagc agcagatcag agaagatggc 180
cggactcgac accttctctc tcacctcgga gtccgtgaac gagggacacc ctgacaagct 240
ctgcgaccag gtctcagatg ctgttctgga ngttgcttgc tgangacctg acagcaa 297

<210> 400
<211> 279
<212> nucleic acid
<213> Zea mays

<400> 400

gtcggatctg agacgagacg agacgatnnc ccctcccctc aaccggaact tgttttacct 60
catctcatcc cacngactcc ncccacccac ccgcccgctg cctccgcccg atctcgctcg 120
actcggatcc gcccgaccac gaccaccccgc cgtcgccgcc gcgcagagca gcagatcaga 180
gaagatggcc ggactcgaca ctttctctt cacctcggag tccgtgaacg agggacaccc 240

tgacaagctc tgcgaccagg tctcagatgc tgttctgga 279

<210> 401
<211> 307
<212> nucleic acid
<213> Zea mays

<400> 401

cggatctgag acgagacgag acgatnnncc ctcccctcaa ccggaacttg ttttacccca 60
tctcatccca ctgantctnc ccatccaccc gcccgnggcc tccgccggat ctcgtcggac 120
tcggatccgc ccgaccacga ccaccccgcg tcgcccgcgc gcagagcagc agatcagaga 180
agatggccgg actcgacacc ttctctttca cctcggagtc cgtgaacgag ggacacctg 240
acaagctctg cgaccaggtc tcagatgctg ttctggacgt tgcttgctga ggacctgaca 300
gcaaggt 307

<210> 402
<211> 291
<212> nucleic acid
<213> Zea mays

<400> 402

gtttgcctct tctccctctt gccggtcccg aataaagagc agcagcgcaa gaggtacggt 60
agagcgagaa gaaggcaatg gcggncgaga gcttcctttt cacctcggag tccgtgaacg 120
angggcacc cagacaagctg tgcgaccagg tttaaaaaan ccgtgcttga cgcctgcctc 180
gcgcagaccc cgacagcaag gtggcttncg agacttncac caagaccaca tgggtangttt 240
tngnngntgg nncgncaaag nnaangngtt tnanaaaaat ntntnnancc c 291

<210> 403
<211> 386
<212> nucleic acid
<213> Zea mays

<400> 403

caagaaagnc ggcaacgggc cgctacctca agacgggggc gnacggccac tttggaagg 60
acgacctga cttcacctgg gaggtggtga agccactcaa gtcggagaaa ccttctgcct 120
aaggcggcct tttttttcag taagaagctt ttggtggtct gctgtgctta atcatgcttt 180

tatatggctt ctacatgttg tggttctntc ttgatctgca ccgngcttat cgnntnngtt	240
gtactgncct aataaatnng tgcttatgan gacttgtnn tggntnnnt antanngttn	300
naatgcttta aaacaatgan tgaattncaa gccannnttt ttttgagaag taannattat	360
tngntaannn gntnngnntn tnnngg	386

<210> 404
 <211> 144
 <212> nucleic acid
 <213> Zea mays
 <400> 404

tccgtgttcg tcgacacgta cggcacccgc gcgatccccg acaaggagat cctcaagatt	60
gtcaaggaga acttcgattt caggcctggc atncatcatc atcaaccttg acctcaagaa	120
aggcggcaac gggcgctacc tcaa	144

<210> 405
 <211> 293
 <212> nucleic acid
 <213> Zea mays
 <400> 405

agaacttcga cttcaggccc gggatgatca gcatcaacct cgacctgaag aagggcggca	60
acaggttcat caagaccgcc gcctacggcc acttcggccg tgaacgacgc cgacttcacc	120
tgggaggtgg tgaagcccct caagttcgac aaggcatcgg cttaagggttg ggagtgtcac	180
tgtggacatg aggactacct tcctctggct ctgctgttac ctgcaagcat tgctgtgtgt	240
ggatgtgtgt gtttgatcag tgactggctg ctgtccatag aagatgaacg gag	293

<210> 406
 <211> 175
 <212> nucleic acid
 <213> Zea mays
 <400> 406

ggtcaccatc aacctcgacc tcaagaaggc cggcaacagg ttcacatcaaga ccgccgcata	60
cggccatttg gncgtgacga cgccgacttc acctgggagg tggatcaagcc cctaaagaag	120
gcatccgctt aagaatgtat tgggaagttc actggacatg aggttcacatc tcgtc	175

<210> 407
 <211> 219
 <212> nucleic acid
 <213> Zea mays

 <400> 407

 aggggtgtgca cggccacttc accaagcgcc ccgaggagat tggagctggt gaccaggggc 60
 acatgttttg gntgcgactg acgagacccc tgagtgatgc cctcagccat gtcttgccac 120
 caagctggtg tcgtctcacg gagtnccaag atggactgcc ctgntcagcc gtggaagacc 180
 agtgcagtga tacgnagagg tggcatgtcc acggtnnnc 219

<210> 408
 <211> 178
 <212> nucleic acid
 <213> Zea mays

 <400> 408

 gccagggatg atcaccatca acctcgacct caagangggc ggcaacaggt tcatcaagac 60
 cgccgcatac ggccactttg gctgaacgac gccgacttca cctgggaggt ggtcaagccc 120
 ctaaagaagg catccgctta agaatgtatt gggaagttca ctggacatga ggttcac 178

<210> 409
 <211> 126
 <212> nucleic acid
 <213> Zea mays

 <400> 409

 gcaatggcgg cggagagctt cctgttcacc tcggagtccg tgaacgaggg gcacccagnc 60
 aagctgttcg ancaggtgtc tgangcggtc tggangcctt cctgnntcag gancccgaca 120
 ntaaag 126

<210> 410
 <211> 132
 <212> nucleic acid
 <213> Zea mays

 <400> 410

 gacctcaaga ngggcggcaa caggttcac 60

gacgacgccg acttcacctg ggaggtgggc aagcccctaa agaaggcacc cgcttaagaa 120
tgtattggga ag 132

<210> 411
<211> 83
<212> nucleic acid
<213> Zea mays

<400> 411

gtcggangcg gtgctggang cctgcctggn gcagganncc ganagcaagg tggcctgcga 60
ganctgcacc aagangaaca tgg 83

<210> 412
<211> 133
<212> nucleic acid
<213> Zea mays

<400> 412

gcctcgaccg gatctcgctg gactcggatc cgcccgacca ccccgcgccg ccgcagatca 60
aagaagatgg cagctgtcga cacattcctc ttcacctcgg agtctgtgaa ngaggganac 120
cctgacaagc tct 133

<210> 413
<211> 290
<212> nucleic acid
<213> Zea mays

<400> 413

tcggatctga gacgagacga gacggnnnnc cctcccctca accggaactt gttttacccc 60
atctcatccc agtgantcnt accacncanc cgcgcgngc ntccgcnnga tctngtcgga 120
ctcggatccg cccgaccacg accaccccg ctcgcccgcg cgcagagcag cagatcagag 180
aagatggccg gactcgacac ctctctcttc acctcggagt ccgtgaacga gggacaccct 240
gacaagtctg cgaccaggtc tcagatgtgt ttggacgttg nttgctgagg 290

<210> 414
<211> 310
<212> nucleic acid
<213> Zea mays

<400> 414

aacaggttca tcaagaccgc cgcatacggc cactttggcc gtgacgacgc cgacttcacc 60
tgggaggtgg tcaagcccct aaagaaggca tccgcttaag aatgtattgg gaagttcact 120
ggacatgagg ttcattcttcg tctggctctg ctgatacctg caaggatnnn nnnnnnnnnn 180
nnnnnnnnnn gatgtgtgtt tgatcagtga ctggctgctc tgctccatag aagatgaatg 240
aagagagaga tgggtgaagaa ggctttggca aatggcaatt gccgcagcaa gccatgtcgg 300
cgccactgac 310

<210> 415

<211> 85

<212> nucleic acid

<213> Zea mays

<400> 415

ctcagggtgt gcatggccac ttcaccaagc gccccgagga gattggagct ggtgaccagg 60
gacacatggt cgggtatgcg accga 85

<210> 416

<211> 166

<212> nucleic acid

<213> Zea mays

<400> 416

gagcagcagc gcaaggngan ccgccagctt gccccagggt ggtagancca gcnagaagaa 60
ggcaatnncg gcggagagtt cctgtttcaen tcggagtccg tgaacgangg gcacccagac 120
aagctgtgcg accaggtnct ggacgcggtg ctggacncct gentgg 166

<210> 417

<211> 267

<212> nucleic acid

<213> Zea mays

<400> 417

aagacggcgg cctatggcca ctttgggaagg gacgaccctg acttcacctg ggaggtggtg 60
aagccactgc aagtcggaga aaccttctgc ctaaggcggc cttttttttc agtaagaagc 120
ttttggtggt ctgctgtgct taatcatgct tttatanggc ttctacatgt tgtggttctt 180

tcttgatctg caccgcgctt atcgtttgtg ttgtactgcc ctaataagtg gtgcttatga 240
ggactgtttc tggttttgct gcttatg 267

<210> 418
<211> 273
<212> nucleic acid
<213> Zea mays

<400> 418

acgaccccca cttcacctgg gaggtggtga agccctcaa ggcggagaag ccgtcttctg 60
catgaggcgc ctctctgtt ttggaagaag cttttggtct ggtctggtct ggtctggtgt 120
gctgcgctc tatcatgctt ttttatggct cctacttgtg attcttgatc tgcccccttg 180
ttatcatttg tactgtactg tcaactgtct aataagtggc acgtgtgcgg ggtcgtattg 240
tgtctgctta ttcacctaga ggattatttc tgg 273

<210> 419
<211> 57
<212> nucleic acid
<213> Zea mays

<400> 419

atcgctgctg acctgaagga gcatgtcacc aagcctgtca tccctgagca gtacctt 57

<210> 420
<211> 235
<212> nucleic acid
<213> Zea mays

<400> 420

gtcggatctg agacgagacg nngnnncct cccctcaacc ggaacttgtt ttaccccatc 60
tcacccact gactcngncc acccaccann ncantgcctc cgcgggatct cgtcggactc 120
ggatccgccc gaccacgacc accccgcgcc gccgcgcgc acagcagcag atcagagaag 180
atggccggac tcgacacctt cctcttcacc tcggagtccg tgaacgaggg acacc 235

<210> 421
<211> 297
<212> nucleic acid
<213> Zea mays

<400> 421

gccaagggat gatcaacaat ccaacntoga nctccaagaa ngggcggnaa caggttcac 60

aagaccgccg catacggcca ctttggccgt gaacgacgcc gacttcacct gggaggtggt 120

caagccccta aagaaggcat ccgttaagaa tgtattggga agttcactgg acatgaggtt 180

catcttcgtc tggtctgtct gatacctgca aggatnnnnn nnnnnnnnnn nnnnnnnnga 240

ttgtgtttga tcagtgactg gctgctctgc tccatagaag atgaatgaag agagaga 297

<210> 422

<211> 88

<212> nucleic acid

<213> Zea mays

<400> 422

cacncacgag accgtcacca acgacgagat cgccgccgac ctcaaggagc acgtcatcaa 60

gcccgatgat cctgagaagt acctgcga 88

<210> 423

<211> 285

<212> nucleic acid

<213> Zea mays

<400> 423

ccgggtcgga tctgagacga gacgagttac catctcatcc caactccgga acgaacaagt 60

taccatctca tcccaactcc gctcgaccg gatctcgctg gactcggatc cgcccgacca 120

ccccgcgng ccgcagatca aagaagatgg cntcgctgac acattcctct tcacctcgga 180

gtctgtgaac gagggaacac ctgacaagtc tgtgaccagg tctcagatgc cgttcttgag 240

cttgcnttgc tgaggaccct gacagcaagg ttgttgtgag actgc 285

<210> 424

<211> 136

<212> nucleic acid

<213> Zea mays

<400> 424

accacgacca ccccgcgctg ccgcccgcga naggcagcaga tcagagnaga tagccggatc 60

tcgacacnt cctcttcacc tcggagtccg tgaacgaggg acacctgac aagctctgag 120

accaggtctc agatgc

136

<210> 425
<211> 217
<212> nucleic acid
<213> Zea mays

<400> 425

cgagacgagt nncctcccc cacctcgct caccacacg gaacgaacaa gttacaatac 60

tcaccccaac ccgccttcg accggtctc gtcggactcg gatccgcccg accaccccg 120

gccgccgag atcaaagaag atggcagctg tcgacacatt cctcttcacc tcggagtctg 180

tgaacgaggg acacctgac agctctgtg accaggt 217

<210> 426
<211> 231
<212> nucleic acid
<213> Zea mays

<400> 426

cggtctgag acgagacgag ttaccatctc atcccaactc cggaacgaac aagttaccat 60

ctcatcccaa ctccgcttcg accggtctc gtcggactcg gatccgcccg accaccccg 120

gccgccgag atcaaagaag atggcagctg tcgacacatt cctcttcacc tcggagtctg 180

tgaacgaggg acacctgaca agctctgtga ccaggctcaa tgccgttctt g 231

<210> 427
<211> 85
<212> nucleic acid
<213> Zea mays

<400> 427

agtacctga ngagaagacc atcttcacc tcaaccgctc cgggcgcttc gtcacggnn 60

ggntcgangg tgacgtnggc ctcat 85

<210> 428
<211> 142
<212> nucleic acid
<213> Zea mays

<400> 428

caacccccgcc tcgaccggat ctcgtcggac tcggatccgc ccgaccaccc cgcgcgcgcg 60
cagatcaaag aagatggcag ctgtcgacac attcctcttc acctcggagt ctgtgaacga 120
gggacaccct gacaagctct gt 142

<210> 429
<211> 151
<212> nucleic acid
<213> Zea mays

<400> 429

cgttcgctc ttctcctccc tcctgccggg tccttaataa agagcagcag cgcaagaggt 60
tggtagagcg agcgagaaga aggcaatggc ggcgagagct tcctgttcac ctcggagtcg 120
gtgaacgagg ggcacccaga caagctgtgc g 151

<210> 430
<211> 257
<212> nucleic acid
<213> Zea mays

<400> 430

agtgtcctc ctctatgaa gaaggactct ccacgttctc nccgtcaaag cagtggaaaa 60
cagatttggg cgaggtagca acagcgtctt cagcagcgca gaagctctgg tatacgagga 120
gcccgctcc aggcagctcc tgctccacca tgttggtgca gtcatagacc aaatctgttt 180
tccactgctt tgacggcgag aantgganna gtgtcctcc tcctatgaag aaggactaca 240
aactagctaa tcttctc 257

<210> 431
<211> 220
<212> nucleic acid
<213> Zea mays

<400> 431

aaagagatga cgaagctctc ggggattcat gagatcattc ccgagatgga gatctgtgac 60
tttgagtttg acccctgtgg gtactcgatg aatggcgtct tcgggcctgc agcctccacc 120
atccacgtga cacccgagga aggtttcagc tacgcaagct acgaagctat gaacttcgac 180
cccagctcac tgggtctacag cgatgtgatc aggaggggtcc 220

<210> 432
 <211> 240
 <212> nucleic acid
 <213> Zea mays

 <400> 432

 gggagaaatt cgtgagatct tggnnctgtnt cagggcgtgc gagcncctgga atcatggggtt 60
 tcacacatag cttcgcctnt tngaatttna tgtactaatg gagtcnaagg gtggcaaaaa 120
 gtcnnncngt agtcgttcta tgggtgtatga agcgccctt ggctacagca ttgaggncgt 180
 tcgacctgcc ggagcgtgaa gaantccagc tgcgggttac tcgaactgcg ngaatnagcg 240

<210> 433
 <211> 263
 <212> nucleic acid
 <213> Zea mays

 <400> 433

 cttgtgtcgg tagttttccg ttggctctgg ctgccttctt ctgcttctga gattccaact 60
 tgtcttgccc atctctctct ttcctctctc atctctctct tcttgcaaca cgtcatccag 120
 tggcgatgtc ttcagcagat tcttgtgtct cttctctctgc ctccctatt ggctttgagg 180
 gctatgagaa gcgcctcgag atcacgttct ctgacgcgcc tgtctttgag gacccttggt 240
 gtcgtggcgt gcgcgcctc tcc 263

<210> 434
 <211> 290
 <212> nucleic acid
 <213> Zea mays

 <400> 434

 taatgctgat ggcaacacaa cattagtctt gaagaagaat gaagctttct tcaagactaa 60
 tgctgatggc aacacaacat anttccaagg aatgacgaa gctctctggt atctctgaaa 120
 ttatccctga gaaggagatc tgtgattttg acttcgaacc ctgcggctac tccatgaatg 180
 caatccatgg ctctgcgttc tccacgatcc atgtgacgcc tgaggatggg ttcagctacg 240
 ccagttatga ggttatgggc ttggatgcc aatgcctgtc ttacggtgac 290

<210> 435

<211> 258
 <212> nucleic acid
 <213> Zea mays

 <400> 435

 tggagcagga gctgcctgga ggcgggctcc tctgtacca tngcttctgt gntgctgaag 60
 acgctgttgc tacctcgccc aaatctgttt tccacngcnt tganggcgag aacgtggaga 120
 gtgctcctcn tcgnntgagg agganancaa gnggnnaang ttctntgttg ggagnatnan 180
 acgggntgcc atggaggaga nggcgggatt ccttgatgag taatangggg ctctgggntc 240
 gattagcttc tgattgtt 258

<210> 436
 <211> 263
 <212> nucleic acid
 <213> Zea mays

 <400> 436

 cttgctctaa aacaatcgca gtcttgcaag ttgttgctgc tgctcctacc cctgcctctg 60
 caattgggtt tgagggatat gagaagcgcc tcgagatcag cttctatgag gcacctgtct 120
 tcgctgacct caacggaagg ggattgtgtg cactcttgcg tccctagatt tactctattt 180
 ctgaccatgc acggtgcacc gttgtctctg agctatcaaa cgaggacttt gactctatgt 240
 cttatctgag tcaagcctgt ttg 263

<210> 437
 <211> 266
 <212> nucleic acid
 <213> Zea mays

 <400> 437

 cccaganatg gagatctgtg acttcgactt cnagccctgt ggctactcca tgacatgctg 60
 ttcatggcnc tgcnattgtc gaccattcat gnganccnc aggacgggca tcagctaatz 120
 aaagcaacan ggncatgggc nttaanccgg ggctcctttc tcatatggtn anctggntaa 180
 ganggtgctg aagnnnnttn gncnactga ntncnctgtt gncgtaacct atcttccggt 240
 gatcgggcaa tgcgaagacc tggggg 266

<210> 438

<211> 281
 <212> nucleic acid
 <213> Zea mays

 <400> 438

 gggctgcccc gtgtaggcaa gtcaaccatc atgagcgagc tttattaata tgatgcaagc 60
 tacctggttt ggtggtaatg cttatgtgat tgggtgattct gcaaagcata agcagaagtg 120
 gcacgtctac tatgccacca ctgagcaccc ctgaggagct tgttggttact cttgagatgt 180
 gcatgactag gctggacaag aagagagctt atgtcttctt caagacctct attgatgggt 240
 acacatcttg tgctaaggat atgaccaagc cttcagtgat t 281

<210> 439
 <211> 334
 <212> nucleic acid
 <213> Zea mays

 <400> 439

 gcagaagtgg cacgtctact atgccaccac tgagcacccc taaggagctt gttggttactc 60
 ttgagatgtg catgactagg ctggacaaga agagagctat gtcttcttca agacctctat 120
 tgatggttac acatcttctg ctaaggatat gaccaagcct tcagtggcat cgtcaaggag 180
 tgcgtcgtga ccagtgggtgc tagcagcaag gccatggcac tcagggtcca tgggtcgtgg 240
 gtgtggcttg ttcagcgctt actattcgcg ggagtcggcg aggtgcctgc tgaacttgggt 300
 ggaagtggag tccattatga tctgacacga cctc 334

<210> 440
 <211> 349
 <212> nucleic acid
 <213> Zea mays

 <400> 440

 catctatcct ctgaagattg tcatcaagac ctgtggcact accaagctcc tgctcacaat 60
 tccaaggatc ctagagcttg tgaagagctg tctatgctct tgtgctgtga antatcccgc 120
 gggacgttca tctttcctgg cgnacagcag cccccaccg gagttctccg aggagttgtg 180
 tattaaccgt actttggggg ctgaagtctg gtggcatgct tatgtgattg gagatgcagc 240
 aagaccagga cagaagtggc acatctatac gccactgagt acccagagca accatgtcac 300

cttgagatgt gcatgatggt tggacagaag aagcttcatc ttcttcaag

349

<210> 441
<211> 260
<212> nucleic acid
<213> Zea mays

<400> 441

tttctcttat ggngacctgg ntaagagggt gctgaggcgc ttnggtccaa ctgagcnctc 60

tggtgccgtg accatcttcg gtgatcggga caatgcgaag acctggggga cgaaactgna 120

tgctgaggcc tatgcttgca gcaacatggc tgagcaggag cttgccgatt ggtggcttgc 180

tcatttatca gagcttcaact gttacggccg aancgacctn tgnttcccag ngcaaacntc 240

gnaaattccg ggnaaantaa 260

<210> 442
<211> 447
<212> nucleic acid
<213> Zea mays

<400> 442

cgtccctgca cacggcgggt ttcagactgc gatccattcc gagcttcgag gaatcgatgg 60

tcnagcttcg gtgactaaga gatcaaaactc ttcaagttct acgaggctga agatcctgag 120

catctgtttg gtgaagattc ttatgccatg gaaattcatc gattgatacc gtccttttca 180

tagtcgatca tggttcaagg agattgcatt tgtggatgct ctaatggagt cgaaagggtg 240

taagaaagtc nnnnnnnnnn nnnnnnnnt tcatgtacga agctccccctt ggctacaaga 300

tcgaggacgt tcgccagcc ggaggaatca agaagttcca gactgctgct tattccaact 360

gcgtccgcca gccatcctga tatcgctca catgcaattc gcggtagagt aggattttaa 420

ttcagttttc ctcttgngtc ngnagg 447

<210> 443
<211> 192
<212> nucleic acid
<213> Zea mays

<400> 443

gggctgagac ttcgannacg agccctnttg ctattncatg aatgctgnaa atnanccggg 60

gttggggana attcatntga gncnagagga cngattnagc tatgcaagct annaggtcat 120
 gggctngaac ccggactctt tntggttatgg tgacctgcct aanagggagc tgangngctn 180
 nggtccaaat ga 192

<210> 444
 <211> 376
 <212> nucleic acid
 <213> Zea mays
 <400> 444

caaagctnnt gctcgctatt ccgaggntcc ttgnactngn tgaanagctc cngttgcnac 60
 tcgctgcagt taaanactnn cgtggaacgt ncatattccn tgaagcacan ccontcnnac 120
 acaagaactt ngntgacgag gttgccttcc tgaatngctt attcngtggn ctnaagtncn 180
 gnngcaatgc ttatgtgant ggtgactctg ccaanccccg ncagaagtgn cacgtctact 240
 acacnctga gcacctgan gagcctgttn gnactctgga gatgtgcatg actgggctgg 300
 acaagancaa agcttcatgn cntcttcaag accactgnnt gatggttact cgctnatncg 360
 ccaaggatat caccaa 376

<210> 445
 <211> 502
 <212> nucleic acid
 <213> Zea mays
 <400> 445

gtgctagtgg cnangnnntn nngtatnaan gacacactcc ggtncggaat tccccgggtcg 60
 acccacgcgt ccgcggacgc gtgggggttg caaagaattn cctnccctac cgtcgctcgc 120
 gctcgctctgg nngggaagtt ccnggaccen ngatttngcc caattctnag gnaaaaannc 180
 gggtttacntn ncttaaccen gggnnctctn cctntngtng ttgttaaagg ganaaaattn 240
 tnagatctgt tccggatcaa gcgtgcganc tcgggaatca agggtttttna cacatatctt 300
 ttccatttga aaattgatnt actaaatggn gtctanaagg tggcaaaaag tctnacaata 360
 gtggttctat natgtatgaa gctccccctn gctncagcat tnaggacgtt cgacctgccc 420
 gangcctnaa gaaatttcca gtctnctgct tactncaact tcncaaaaa accattctga 480
 tatccttttg cttnctcaat nt 502

<210> 446
 <211> 160
 <212> nucleic acid
 <213> Zea mays

<400> 446

agtngctgca cttaaccggt nctttggcgg cctgaaatct ggtggnangg gcgggtgtga 60
 tnggagatcc agcaagacct ggncagaagt ggcacttntt nnaacgncan tnantnccna 120
 ttancaacca atggttaacc tanaaatgtg catnactgna 160

<210> 447
 <211> 487
 <212> nucleic acid
 <213> Zea mays

<400> 447

attacgtccn ctagcccttc gccnncgctc ttttcctna gaggcgccgg caccgangat 60
 ccgggncggg ntcnatntnn agaannngna gtacttgtct cagcccgggg nctgctgcgt 120
 cnggtggtgg tnaaggggag aanntcgtna gatctgntcc ggatcaagcg nncganctcg 180
 ggaatcaggg gtttcacaca tanctgngnc gatcncgaat tctgatgtac taatggagtc 240
 taaggngggc aaaaagtcta gccttacnta cncatnatg catagaagct ccccttggt 300
 acagcattna cgaccgttcg anctgtccng aggcgtgaaa aagntccnnt acngctgctt 360
 actccaactt gcgcgaaaca anccntcctg aanantcccc ttttggttc ctcatctaa 420
 gcactttaag gaattttaat ntctggacac ttntggantn ttnaccaaen ctentctggg 480
 cctaggg 487

<210> 448
 <211> 438
 <212> nucleic acid
 <213> Zea mays

<400> 448

gagganntcg ttgagatcta agatagagaa tcgctggggc angngnctgt ggtctgctgc 60
 gtaggggtgt gntgaanggg agaagtttaa gatctgntcc acagatcacg cgtgcgcgct 120
 cgcgaancgg ggggttcaca catagcttng tcggtttgaa tttgangtac taatggagtc 180